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Exhibition Review



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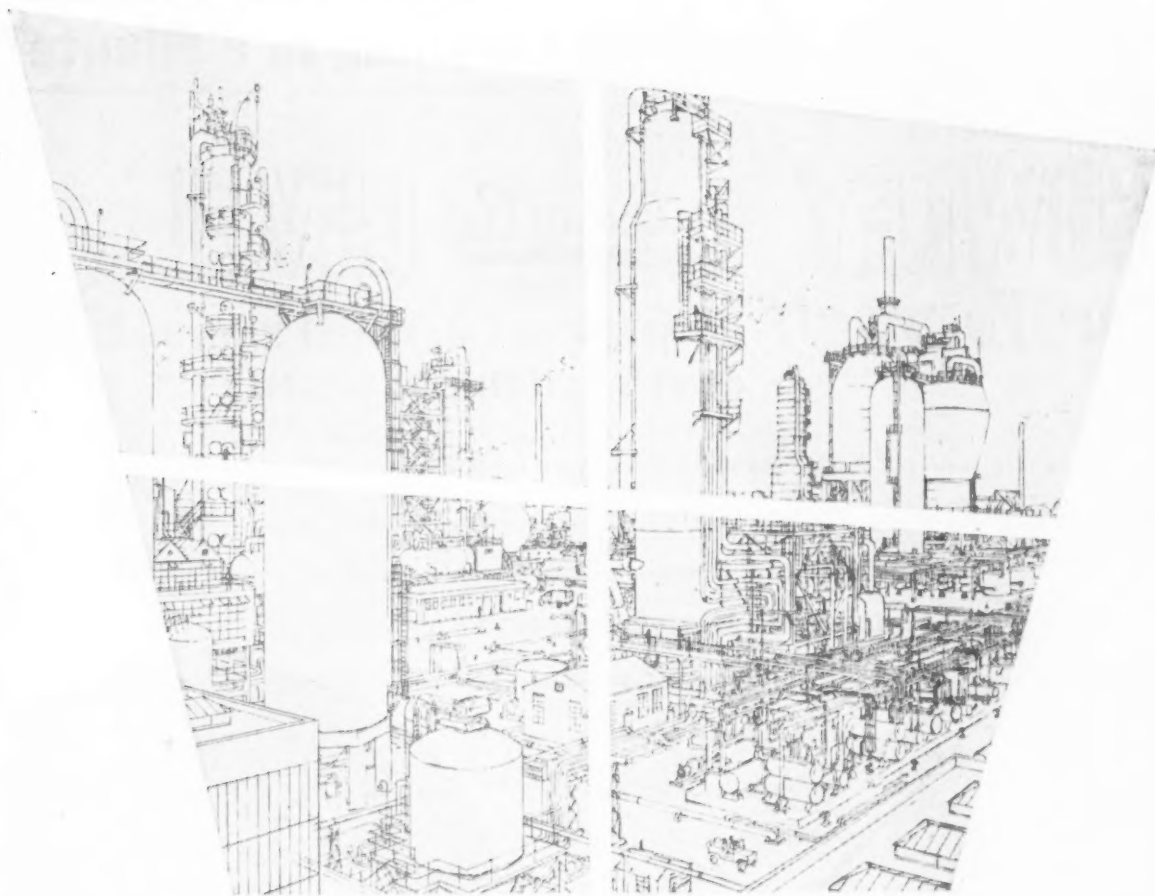
ONE SHILLING WEEKLY

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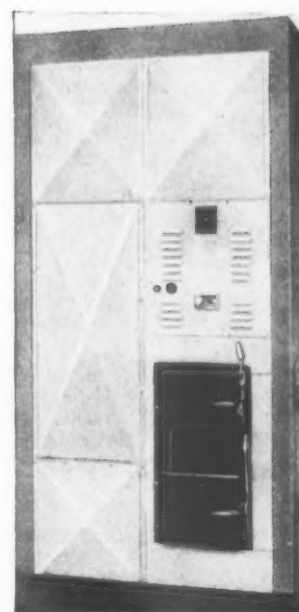
MAXIMUM CLEANLINESS in operation is assured by a compact fully automatic unit, normally installed in the kitchen. The solid fuel model incorporates a smoke-consuming,

down-draught furnace which burns any household fuel—including off-the-ration fuels—at an average consumption throughout the year of about 1½ cwt. per week.

MAXIMUM HOT WATER supply for all domestic needs, and this regardless of whether the space heating system is in operation or not. The solid fuel heating unit incorporates a 40 gallon hot water cylinder.



The Gas Unit



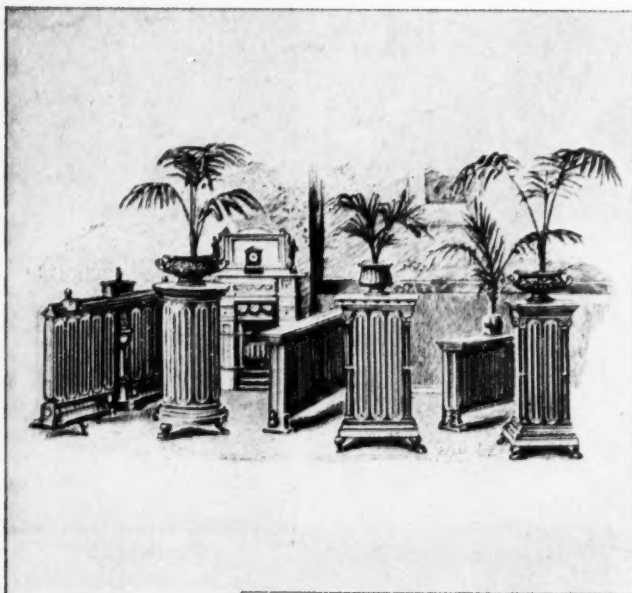
The Solid Fuel Unit

Recommend Radiation Whole-house Warming and show your clients what 20th Century comfort with economy can mean.

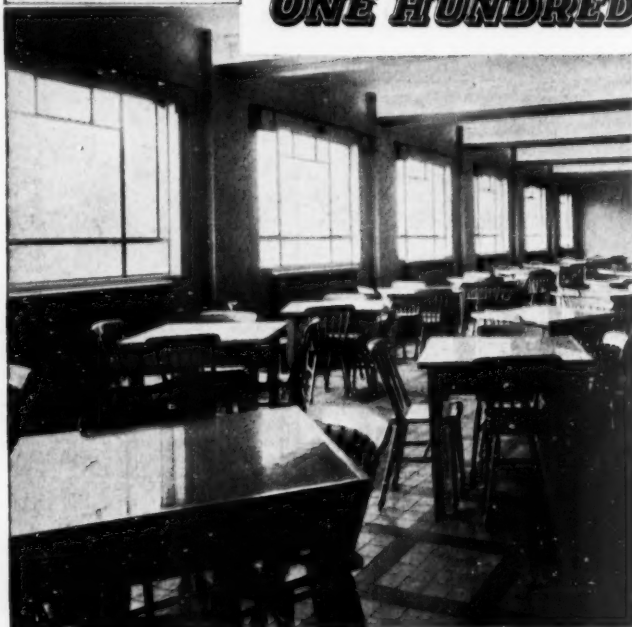
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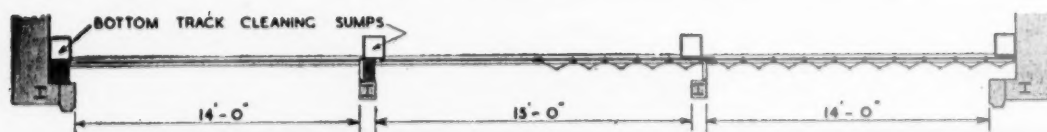
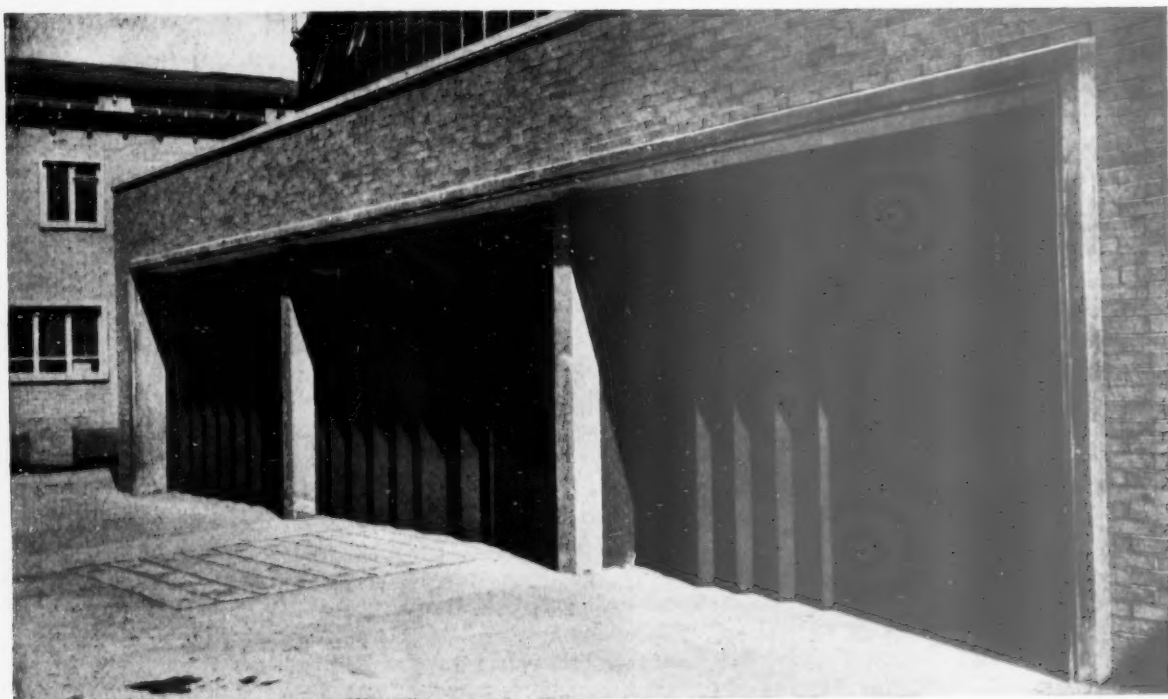
All Beacon Standard Windows, unless otherwise specified, are rust proofed by the application of a zinc sprayed finish using the "metallization" wire process and finally coated with a zinc chromate based paint before leaving our Works. This lengthens the life of the metal by protecting it against the effects of corrosion and it also safeguards the scheme of decoration from the unsightly effects which result from corrosion taking place. This process saves a contractor as much as £4 on an average sized house by reducing the time and material which otherwise is expended if these initial processes are not carried out by the manufacturer.

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BUILDERS BY NATURE



No. 5 · GIANT CLAM

Weight 507 lb. Length 4ft. 6in. These details of a clam's weight and length seem fantastic to most of us, who know only the comparatively small clams found in and around Great Britain. These massive proportions have been reached, however, by a clam found in Australian waters. No wonder such creatures are called *Giant Clams*.

The animal which has to support the huge weight of the shell weighs only 25 lb. at the most, but the Giant Clam rarely carries its house around. Usually it remains anchored to one spot all its life, devoting its energies to building its home.

A fleshy skin, known as the mantle, covers the animal, and from special glands in this mantle a liquid is emitted which hardens in the water and forms the shell. The clam is entirely responsible for the production, shape, further growth and repair of its shell. It is its own architect and builder.

The shell is not lifeless like a stone or rock, because it is composed of animal matter as well as mineral matter. When the clam dies the shell, too, loses its life, although it will stay intact for over a hundred years in the right conditions.

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asphalter of some 30 years experience, has a word to say

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“Concrete is cold stuff. Asphalte must be kept hot during application so that I get time to work it thoroughly. If the underlay is too thin or a poor insulator, asphalte “catches cold”. If the underlay is Black Sheathing Felt that’s a different matter, because there you’ve got a proved thermal insulator, in my opinion, very much better than any other. Architects who specify Black Sheathing Felt do us a good turn, and before a brick is laid guarantee that a really good job will be done.”



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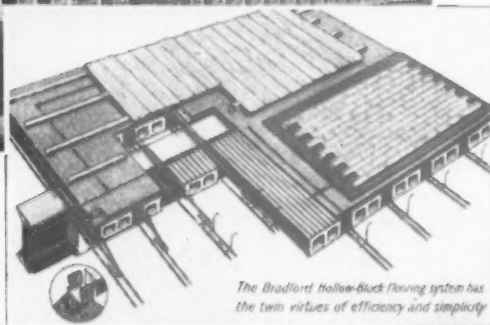
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Architect : N. W. Holder, B.Arch. F.R.I.B.A.
Chief Architect Division, Ministry of Works.
General Contractors : Geo. Wimpey & Co. Ltd.

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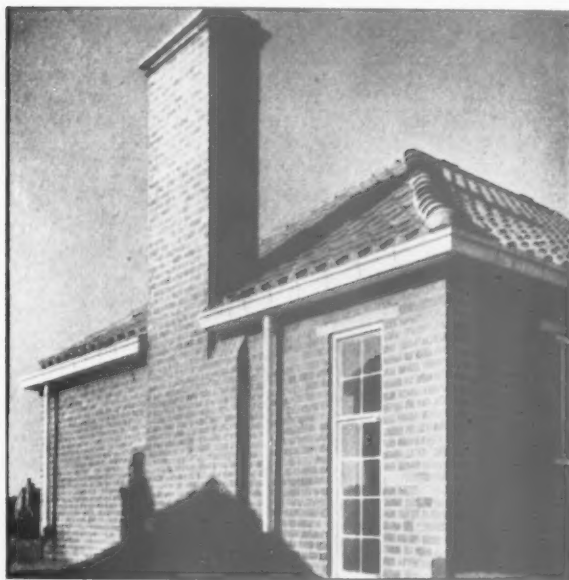
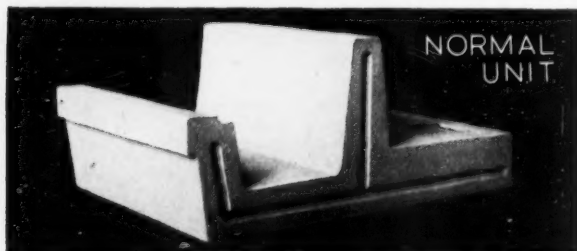
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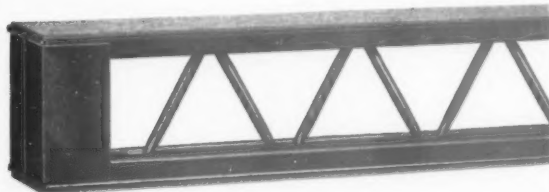
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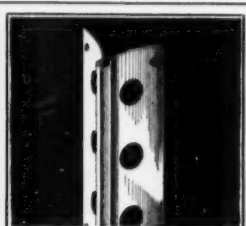
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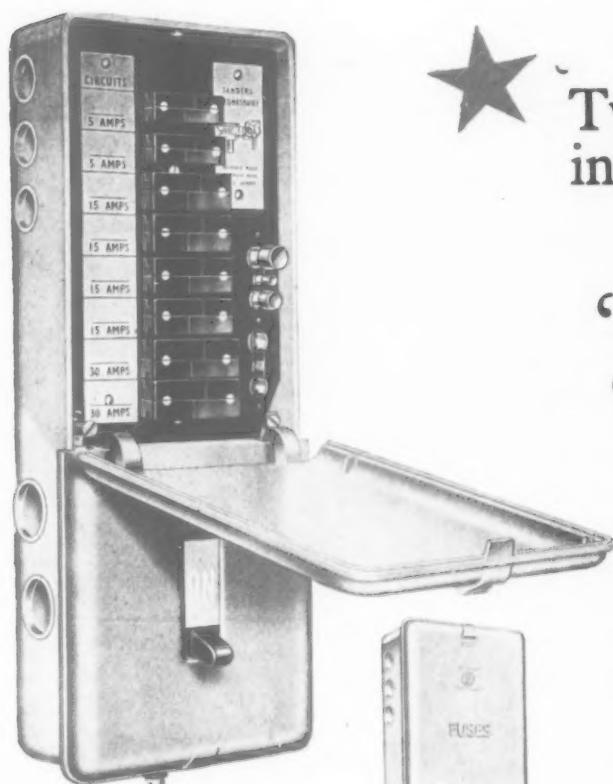
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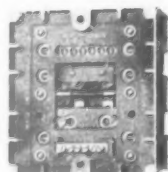
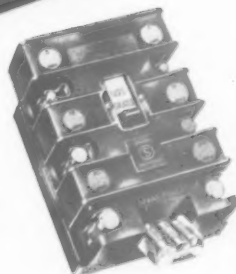
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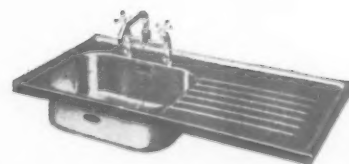
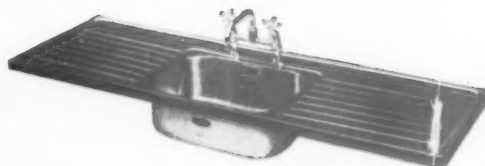
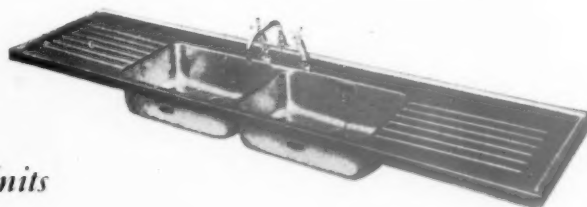
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Architects : James & Bywaters.

Contractors : Wm. Moss & Sons, Ltd.

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Cementone again!

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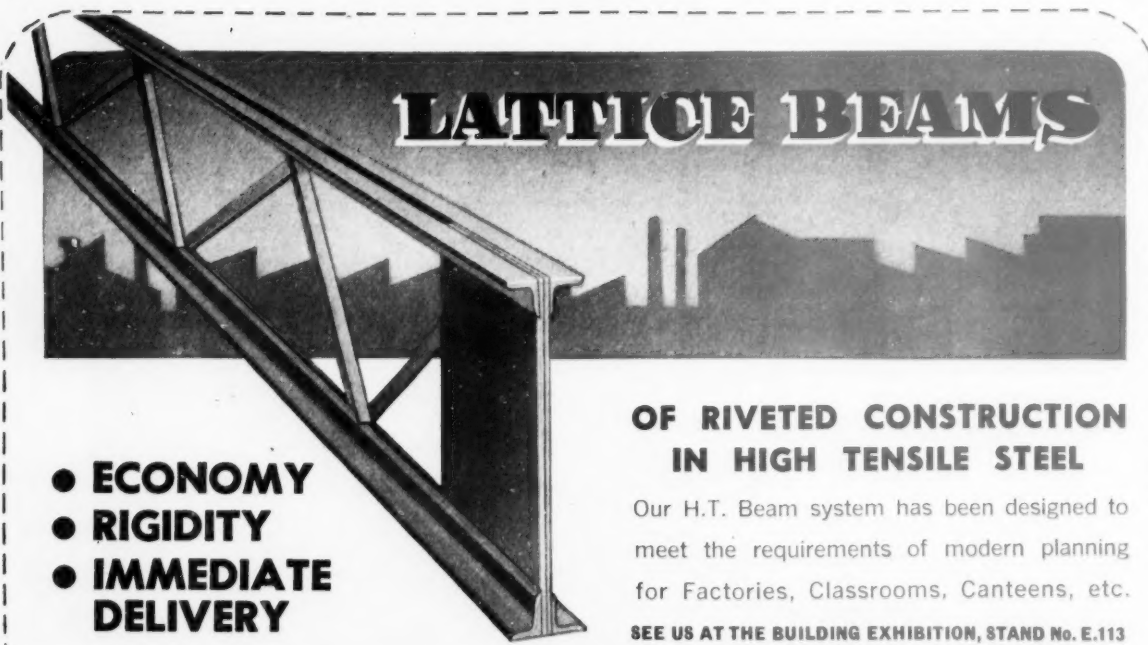
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YESTERDAY

PALMER'S

PALMER'S were already old hands at the game when this first picture was taken . . . a typical Palmer's scaffolding contract of 1890—long before steel scaffolding was invented. Note the characteristic rake of the poles, so different from modern practice.

TO-DAY

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**BUILDING
EXHIBITION**

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No. 211, ROW J

PALMER'S

To-day the words Palmer's, Cradles and Scaffolding are inseparable. Drawing on their 73 years' experience in this specialised field, Palmer's offer you a service that is at once knowledgeable, safe, speedy and therefore economical.

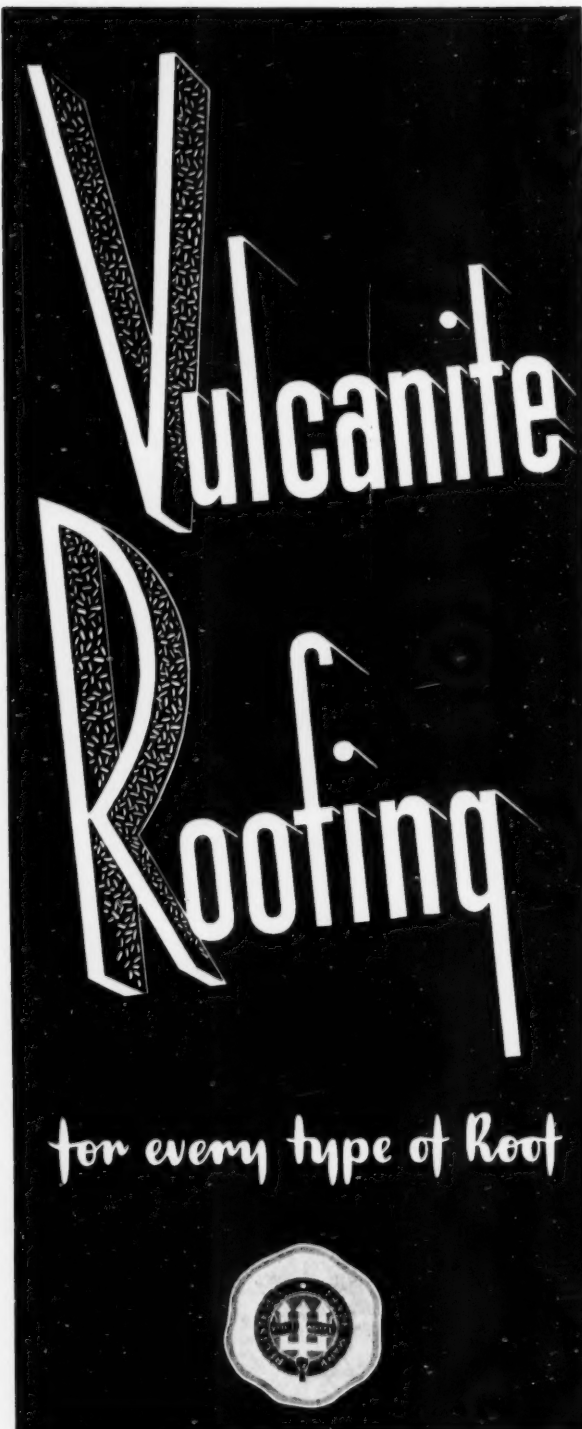


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for every type of Roof

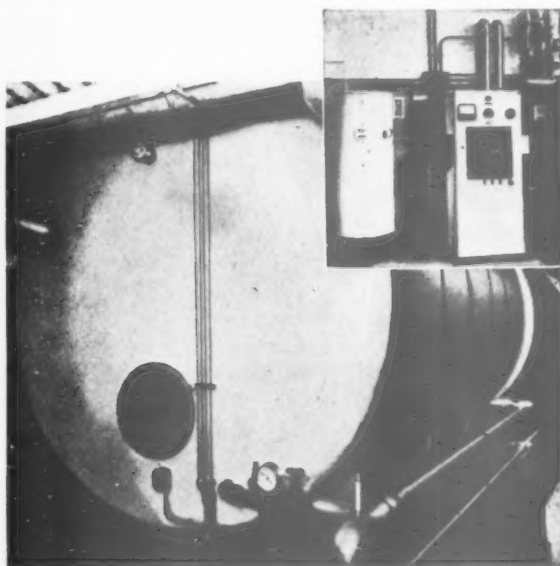


Original patentees of Bituminous built-up-roofs
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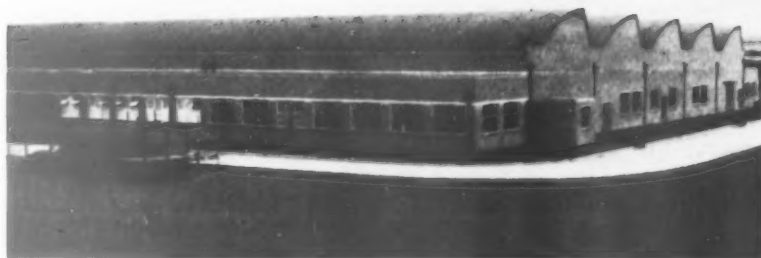
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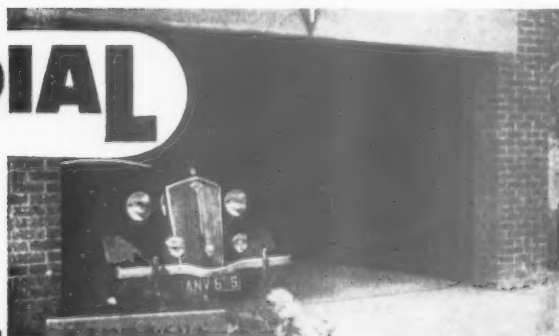
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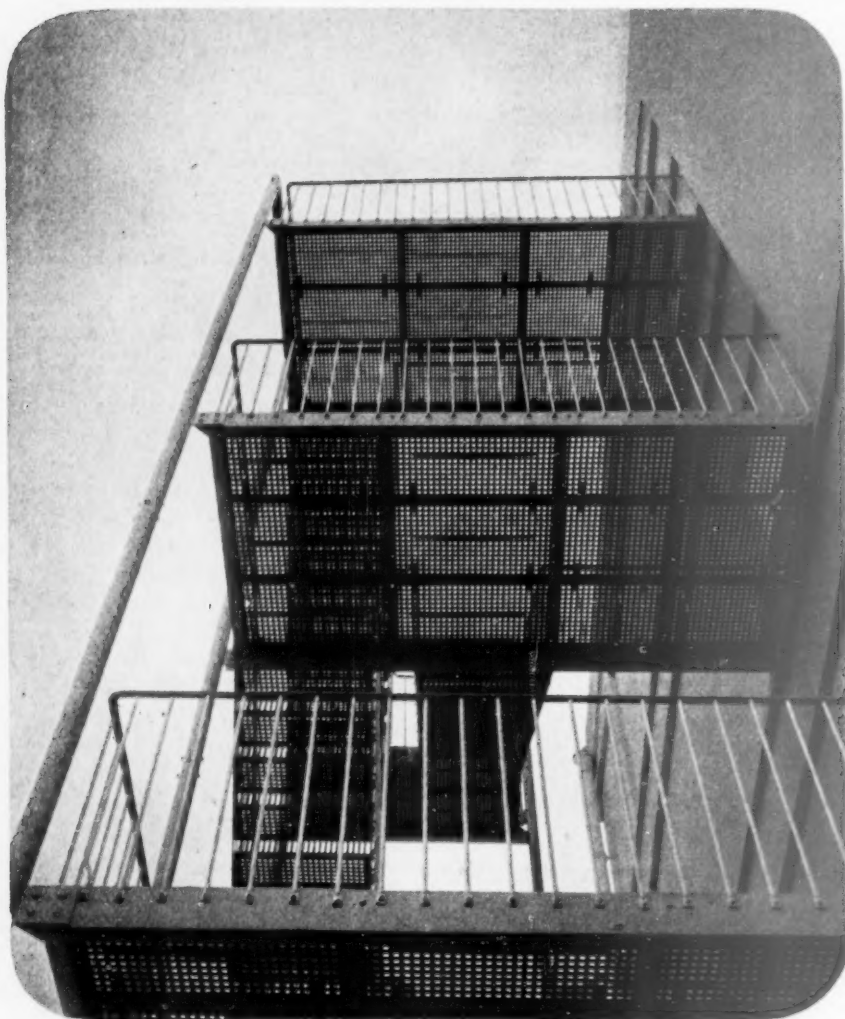
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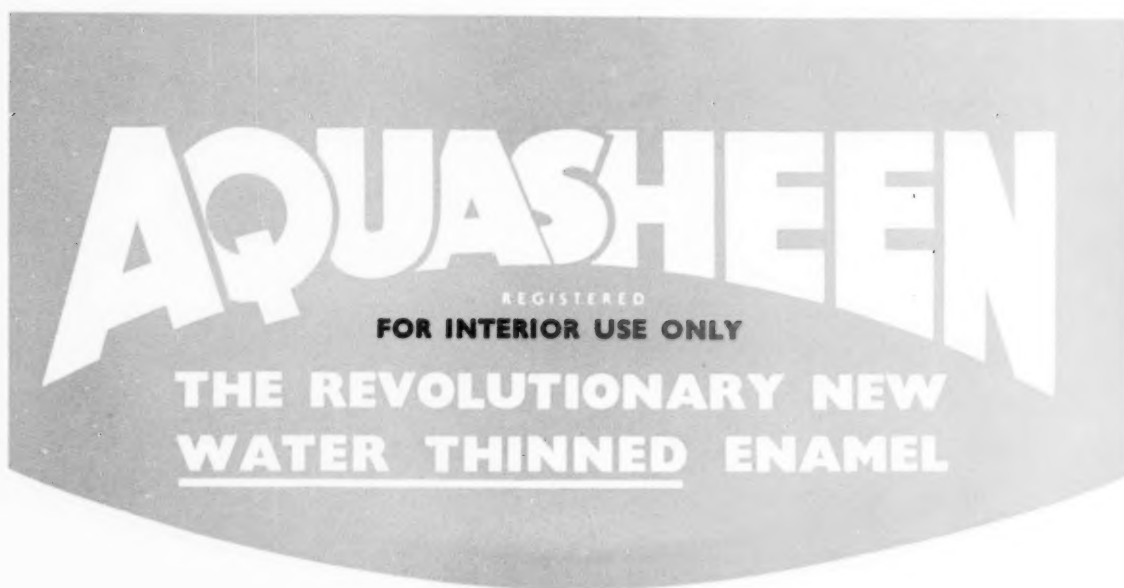
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REBUILDING THE CITY

IS something stirring at last in the City of London? Something that is not entirely related to the roars of bulls and the growls of bears? Or are we deluding ourselves?

The City, important for importance, size for size, is one of the worst bombed urban areas in the country and, up to the present, it remains probably the least rebuilt. What are the facts of the matter?

Out of an area of 677 acres, the famous "square mile," 121 acres were devastated and 104 acres of actual buildings entirely destroyed. The building work carried out in the City since the war, in the last eight years, is stated to be of the value of £49,400,000. This is divided up as follows: about £22,000,000 for entirely new buildings of all kinds, thirty-four in all, and some £27,500,000 for works costing under £50,000. It should be remembered that most of the latter sum is for making good war-damaged properties and presumably includes a fair proportion of first-aid repairs which must subsequently be reviewed.

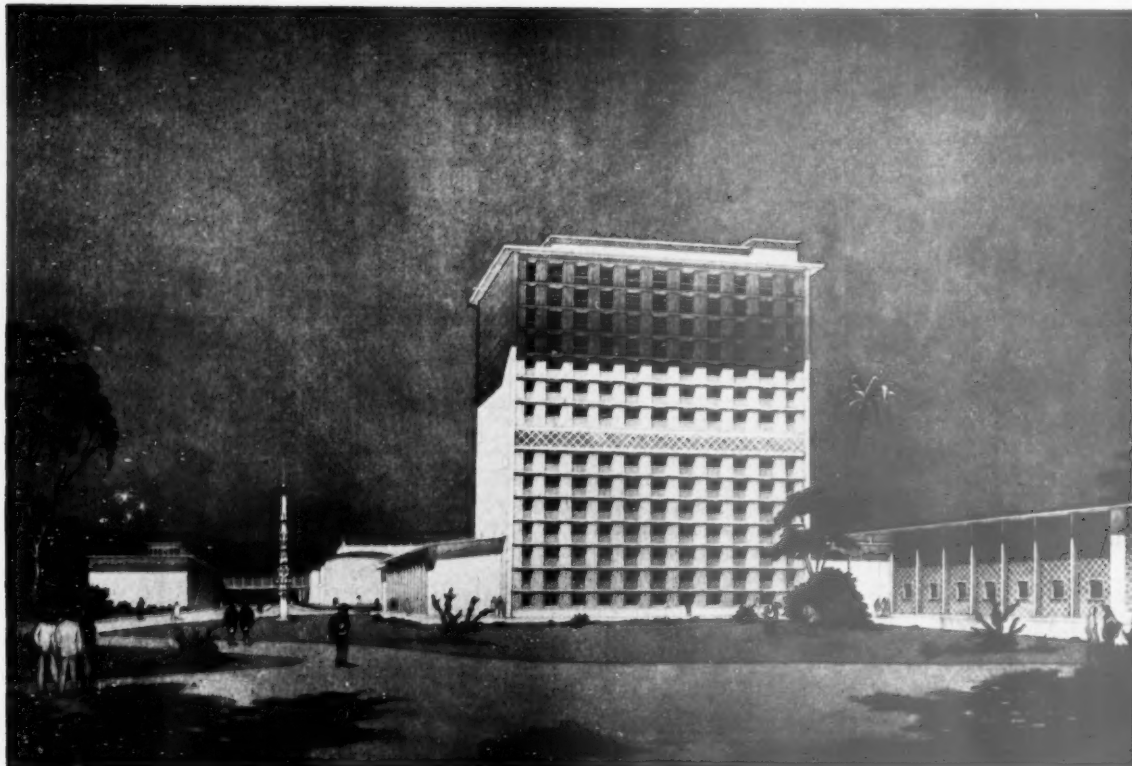
Last February the Government announced that a licensable allowance of £7,500,000 would be made for the City; in fact licences have already been granted though not necessarily expended, for work amounting to more than £10,000,000 since that date, with one or two major projects absorbing a substantial proportion of that sum. Even if we add this £10,000,000 to the £49,400,000 mentioned above and call an all-round result of £60,000,000, this would mean that an annual average of £7,500,000 has been expended since the end of the war. In other words slightly over one acre per year, or just under ten acres in all, has been rebuilt with modern full-height buildings since the war. Ten acres out of 104, say one tenth of the necessary work in eight years. At this rate it would be quite optimistic to suggest half-a-century for completion.

To what can this extraordinary slow progress

be attributed; is it mere apathy? Is it financial politics? Is it because the worst of the blitz occurred among multiple occupations and in the areas of smaller commercial and trading concerns and not in those intensive and solid areas of the financial and shipping quarters which lie to the east of Moorgate? The answers to these questions, amongst others, are difficult to formulate. The development plan has been agreed on general lines for a long time and even the co-ordination of the plan with the County Plan is not now a major difficulty to hold up rebuilding. The routine of licence granting and official approvals is lengthy and irksome but is not insurmountable, even though it does restrain developers from extensive action and the preparation of final plans until a licence is in sight, a delay which causes further delays in starting works.

Two causal propositions seem to stand out from various possible explanations and excuses. First it may be thought that having done without the rebuilt city for so long and national recovery not being apparently much affected, it can be done without for a bit longer. This is a doubtful argument from any point of view and one that defeats itself; for a weed-infested Metropolis is scarcely an advertisement and, indeed, who knows but what if the rebuilding had been tackled with full-speed, the general recovery would have been so much the better and earlier?

The second proposition would be to pass the reasons for delay on to the Treasury and its Government policy of restricting, too greatly and too unevenly, capital expenditure, even when it is known to be for, and an incentive to, greater efficiency and general expansion. Is it, in other words, the Treasury which is holding up the flow of licences for the rebuilding of the City of London? To throw the question into lighter relief, if the Treasury itself with all its various offices had been bombed out,



*University of Malaya: Architects, Easton & Robertson. The Library with stackroom in foreground, and Nucleus. A description of the scheme is given on pages 653 - 659. The perspective is by Lawrence Wright.

would it have remained as a series of weed-grown holes in the ground?

It might be that some doubts might be allayed and some light be let in on the matter, if some of these questions were put to the Government bench in the House of Commons. Perhaps the only representative of the architectural profession, Sir Alfred Bossom, might be the appropriate questioner.

All this delay in rebuilding high-grade buildings in the City of London and, indeed, in any of the larger urban areas, is the direct cause also of a considerable degeneration in quality of building craftsmanship in this country. Other sorts of building do not often require the expertly-trained and long-experienced mason, the fully skilled joiner and the top craftsmen of other trades. These workers are gradually drifting away from their crafts and taking to other and less skilled work, often in self-defence and for self-preservation and often with much discontent.

The highly skilled craft that has suffered most is probably that of the stone-mason. If the City is soon to be rebuilt intensively and in a manner worthy of the City of London, then there will not be masons to do the work; they have already departed from the craft and are not being replaced by apprentices who can see a future for themselves. This is only

one of the many evils that the delays in rebuilding can cause and it is one to which the architectural profession has called attention on every possible occasion. The seeds of common sense still seem to be falling on to the stony grounds of weedy bomb-sites and as the years pass there appears to be but a very little crop.

EVENTS AND COMMENTS

FIRST LOOK AT THE BUILDING EXHIBITION

A spirit of considerable optimism pervaded the official opening of the Jubilee Building Exhibition. Being charmingly received by Mrs. Montgomery and her son and daughter emphasized that this is a family occasion and put everyone in a good mood. Then Mr. Harold Macmillan was able to congratulate the industry and, by inference, himself, for the progress made in housing during the last two years. He undertook to keep the order books full for a further unspecified period, not only for new houses but for repairs and slum clearance, and called upon everyone for greater output. The Minister's reference to the freeing of timber was greeted with par-

liamentary cheers, but he was quick to point out that although timber was free it must not be wasted because most of it had to be imported. Mr. W. Horsfall, the president of the N.F.B.T.E., proposed the vote of thanks in a thoroughly businesslike way, and Sir Luke Fawcett, who recently retired from the presidency of the N.F.B.T.O., seconded with a reference to training for the industry and a suggestion that the brick shortage was really due to the zeal of the bricklayers.

The first day at the exhibition is not the best time, for at least one stand in three has upon it an ancient mariner fresh and eager with his spiel. However, at the risk of offending some of these old friends I managed to see most of it or, rather, most of the stands. Their contents await my next visit. First congratulations to Mrs. Montgomery and her staff for producing what is obviously a very good exhibition. The average standard of design is up again and pure whimsy is quite rare. The materials manufacturers on the whole have shown their products very well, and this applies particularly to the brickmakers. I liked Eastwoods, the London Brick Company, the Sussex and Dorking Brick Company, and the National Federation of Clay Industries' stands. My first prize this year goes to the Carter group of companies for their delightful arrangement of coloured tiles, contrived by A. B. Read. Although many of the tiles shown are for internal use I am told that there is no difficulty about making such things for outside use. Among the many pretty things on the stand there is a fine pottery mural. I feel sure that that is not the correct technical term, but I think you will understand. This stand certainly means brighter building and shows that we need not necessarily allow the University of Mexico to have all the fun. For



Carter Ltd. Stand: Designers, A. B. Read and Christopher Read

ingenious design and good workmanship I commend the little office building on the Chaseside Engineering Co.'s Stand. This is a prefabricated job on a three-foot module and is designed for use at other exhibitions but not necessarily in its present form. The designers, Sheppard, Ham and MacAlpine, have arranged that the plan can be simply altered and the lighting changed without difficulty. The workmanship is outstanding and a great feather in the cap of the company's workshops in which it was made.

Other stands which caught my eye were William Malinsons excellent display of timber done up with brass wires most neatly by Clive Latimer, and Metal Sections by Rodney Thomas and Associates. One or two hardy annuals still remain and there are also one or two pieces of silly nonsense that not all the blarney in the world will excuse.

The suppliers of indoor plants have done better than ever before this year, and have almost completely replaced the suppliers of flowers. Personally, I think that the Scandinavian fashion is now being overdone. I predict a change.

At the end of a day's tour I could not help wondering whether the normal mortal would be able to stand this sort of thing for much longer. There is so much to see and so much that one should learn. Lately there has been discussion about the future of the B.I.F., and some people think that specialist exhibitions are better than a comprehensive trade fair. To me even the specialist Building Exhibition has become too big to be seen in a fortnight. There may be a case for running it, too, by sections in the future.

THE FIRST LETHABY LECTURE

From Olympia I went, hot foot, to the R.I.B.A. to hear Professor Basil Ward, in academic robes, deliver the first of his lectures as Lethaby Professor of Architecture at the Royal College of Art. The series of six lectures extends over three years and is entitled "W. R. Lethaby and His Times." Professor Ward devoted much of his lecture to the background of Lethaby's Times and to the man himself. He most skilfully, by reference to sketch books, put us in the correct frame of mind and mood to hear all about this great architectural educationalist. It seems a long time to have to wait for three years to hear the whole story. By the time the last lecture is reached most of us will, I fear, have forgotten the first one. With this possible criticism in mind Professor Ward made his first lecture complete in itself and proposes to do the same with the other five.

It was strange to see the row of robed figures on the R.I.B.A. dais, only Mr. Howard Robertson was without one, which reminds me that there was once a movement to provide members of the R.I.B.A. with academic dress.

Sir Colin Anderson, who was in the chair, afterwards gave a sherry party at the R.I.B.A. I travelled down to the hall with a well-known art critic; "just look at this lift," he said, "imitation burr walnut." "That's not imitation," I said, "it's real!" "That's even worse," he replied, never at a loss for an answer.

2000 A.D.

The other day my daughter said to me, "won't it be lovely when its 2000!" I said that the main objection to it as far as I was concerned was that I should probably be dead but she was not put off. Do you think that it will be lovely? Whether you do or not you might like to

enter for an amusing competition which has just been announced by the R.S.A. The Society celebrates its Bicentenary next year and the competition forms a part of the celebrations. Broadly speaking the competition takes the form of an essay on, or model picture of, some aspect of life in A.D. 2000. It is considered that the date is near enough for those interested to be able to hazard a reasonable guess at conditions and far enough off for some interesting things to develop meanwhile. There is an entry fee of one shilling and a registration form must be filled in to give the Society a chance to eliminate what it considers to be unsuitable subjects—as such it gives politics and religion. Forms must be in by mid-February and the finished job by the end of June. The first prize is £250, not bad, eh?

NO QUANTITIES ?

The village of Bangor Isycoed in the Maelor R.U.D.C. area has no post-war houses. Messrs. H. Anthony Clark, F. C. Roberts and Partners, of Wrexham, have, however, recently prepared designs for 15 houses to be erected there by the council. It was decided at a meeting of the council that as an experimental measure the contract should be put out to tender without bills of quantities. The architects advised against this suggestion but an amendment

based on this advice was rejected by the council. At a later meeting, when both the regular chairman and vice-chairman of the Council were absent, the Clerk read a letter from the architects asking the council to reconsider their decision and giving the obvious reasons for this advice. The letter pointed out that in the event of the council's decision standing the architects could not agree to proceed with the work. There was some support for the architects' advice in the council, and Mr. H. A. Clark, who was present, explained that their decision had not been arrived at hastily and that it was with great regret indeed that his firm would have to offer their resignation if the decision to proceed without bills of quantities was allowed to stand. A member of the council then said that this would cost the Council about £300—presumably for fees for abandoned work. The acting chairman, Mr. J. C. Barnett, thereupon is reported to have said, "Well, there you are, gentlemen, we are having a pistol held at us now." To this Mr. Clark very naturally took the gravest exception.

It is quite intolerable that an architect should not be allowed to withdraw from a commission if his professional advice is not taken, without being the object of irresponsible and insulting remarks such as this. I am glad to see that a member of the Maelor Council said so in support of Mr. Clark.

ABNER

NEWS OF THE WEEK

Competition Result

In the architectural competition for the design of extensions to Sheffield University the 1st premium of £5,000 has been awarded to Messrs. Gollins, Melvin, Ward, & Partners, of London. The second premium of £3,000 is awarded to J. Mansell Jenkinson & Son, Sheffield, and the 3rd premium of £2,000 to Cruichshank & Seward, of Manchester.

The Assessors were Sir Percy Thomas, Mr. F. R. S. Yorke and Mr. Gerald Young. There were 99 entries.

APPOINTMENTS

Mr. Ewart T. A. Smith, Deputy County Architect, Lancashire, has been appointed County Architect, Kent, in succession to Mr. Sidney Loweth when he retires from that position on March 31, 1954. Mr. Smith, who is 46, was selected from 65 applicants. His salary will be £2,350, rising to a maximum of £2,700.

Mr. Sydney M. Holloway, A.R.I.B.A., Deputy County Architect, Huntingdon, has been appointed County Architect, Huntingdon, in succession to the late Mr. S. J. Hands, A.R.I.B.A., at a salary of £1,450 rising to a maximum of £1,650. There were 69 applicants to the post.

Raglin Squire & Partners have been appointed Architects for the new University Building at Rangoon. Mr. R. Squire and Mr. R. Pitcher flew to Rangoon last week to make a preliminary assessment. They are also visiting Singapore, Kuching, Bombay, and Delhi.

Building and Arts and Crafts Exhibition

There will be an exhibition of work by the students of the Hammersmith School of Building and Arts and Crafts at the School in Lime Grove, W.12, which will be open to visitors from Wednesday, December 9, until Wednesday, December 16, between 10.30 a.m. and 8 p.m.

Parties from Industry, Secondary and Grammar Schools will be welcome and guides may be arranged by telephoning She. 3321.

COMING EVENTS

The Architectural Association.

November 25 to January 1. Annual Exhibition of Members' Sketches at 34, Bedford Square, W.C.1.

The Institution of Sanitary Engineers.

November 30 at 5 p.m. Paper on "Notes on Drainage, Sanitary and Heating Services of Local Authority Housing, with special reference to Rural Districts," to be read by H. Charlesworth, A.M.I.San.E., M.R.San.I., Engineer and Surveyor, Easthampstead R.D.C., Berks. At the Addison Café, National Hall Gallery, Olympia.

Royal Society of Arts.

December 2 at 2.30 p.m. Lecture on "The British Academy of Arts in Rome, 1797-1936," by Lieut. Colonel Ion S. Munro, O.B.E., at John Adam Street, Adelphi, W.C.2. (Selwyn Brinton Lecture.)

The Housing Centre.

December 1 at 1.15 p.m. Talk on "Materials and the Housing Pro-

gramme," by J. D. Jones, of the Ministry of Housing and Local Government, at 13, Suffolk Street, Haymarket, S.W.1.

Incorporated Institute of British Decorators and Interior Designers.

December 2 at 6.30 p.m. A lecture on "Colour and Lighting in Contemporary Decoration," by A. E. Hurst, F.F.S.A., F.I.B.D., Head of the Interior Design Dept., The Walpamur Co., Ltd., at The Building Centre, Store Street, W.C.1.

Reinforced Concrete Association.

December 2 at 6.30 p.m. Talk on "Recent Developments in Prestressed Concrete Construction," by A. J. Harris, B.Sc. (Eng.), A.M.I.C.E., at the Liverpool Engineering Society, 24, The Temple, Dale Street, Liverpool.

Students' Planning Group.

December 3 at 6.30 p.m. Lecture on "The Problems of Aerodrome Development," by T. F. Bird, Under-Secretary, Ministry of Transport and Civil Aviation, at 28, King Street, Covent Garden, W.C.2.

Town Planning Institute

December 3 at 6 p.m. A paper on "Industry and Productivity," to be read by P. A. Macrory, at The Livingstone Hall, Broadway, Westminster, S.W.1.

A.B.T. Diary

The 1954 Building Technicians' Diary is now available, price 5s 4d, post free,* from the Association of Building Technicians, 5, Ashley Place, London, S.W.1. This is the 33rd edition of this useful diary, and readers are advised to apply promptly to avoid disappointment.

* 6s 4d for orders outside U.K.

IN PARLIAMENT

Historic Buildings Councils

Sir David Eccles, Minister of Works, replying to questions by Mr. Colegate about the remuneration of members of the Historic Buildings Councils, stated that only the chairmen would receive remuneration. The chairmen of the English and Scottish councils would be paid £1,500 and £500 a year respectively. No remuneration for the chairman of the Welsh council had been settled, pending experience of the amount of work involved. All members of the three councils would be entitled to claim travelling and subsistence allowances at Civil Service rates. (Nov. 17.)

Weir Timber Houses

Commander Galbraith, Under-Secretary for Scotland, stated in answer to Mr. P. Maitland that of the 3,000 Weir Timber houses already ordered, 618 had been completed and 1,080 more were under construction on Oct. 31. Mr. Maitland asked if he was satisfied with the quality of these houses, and if so, would he consider obtaining more of them. Commander Galbraith said he was satisfied about the quality of those that had been built. He was waiting to see what kind of timber came forward for any remaining houses. (Nov. 17.)

Brick Production

Mr. Arthur Lewis asked the Minister of Works if he was aware of the difficulty of many local authorities and building contractors in obtaining bricks to carry on with their house-building programmes; and what action he was taking to ensure that the building programme was not held up for the lack of materials. Sir David Eccles answered that the production of bricks was expanding and should continue to do so in 1954. The expectation of uninterrupted demand provided the necessary incentive to maximum output of building materials generally. (Nov. 17.)

Protecting Farm Land

Mr. Gower asked the Minister of Housing and Local Government what steps he would take to ensure that housing authorities should be restrained from building upon good agricultural land where other inferior land might be used for such building purposes. Mr. Marples, Parliamentary Secretary, stated that under existing arrangements every proposal by a local authority to build houses on good agricultural land was most carefully scrutinized in consultation with the Ministry of Agriculture; and if there seemed to be alternative land which was less valuable to agriculture, and which was at all suitable for the houses, attention of the authority proposing to build was directed to it. In appropriate cases approval for building on good agricultural land was refused; but most proposals of the kind were checked before

they reached an advanced stage; and all local authorities had been told by circular that good agricultural land must not be taken for housing unless it was unavoidable. The latest supplement to the Housing Manual was designed, among other things to encourage economy in the use of land. (Nov. 17.)

Complaints of Condensation

Miss Herbison asked the Secretary of State for Scotland from which local authorities he had had complaints about the ill effects of condensation in temporary houses; and what he proposed to make these houses more habitable.

Commander Galbraith, the Under-Secretary, said that complaints had been received from about 50 local authorities but in the majority of these cases the degree of condensation was not serious. Experiments to remedy the trouble were being made in various districts, but the effectiveness of these measures could not be fully determined until there had been experience of them under winter conditions. (Nov. 17.)

Bedroom Analysis

An analysis of new building by bedroom types, covering the second and third quarters of 1952 and 1953, was given by Mr. Marples, Parliamentary Secretary to the Ministry of Housing and Local Government, on Nov. 17 in answer to a question by Mr. Blenkinsop. It relates to new dwellings—houses and flats—for local authorities and new towns on approved tenders. The analysis shows that in the two quarters of last year the three bedroomed type numbered 26,536, or 51.5 per cent, and 34,339, or 53 per cent, respectively, compared with 27,725 (54.7) and 26,223 (55.7) in the two quarters of this year. The figures for two-bedroom types were 19,667 (38.2) and 24,764 (38.2) last year, and 18,148 (35.8) and 16,309 (34.6) this year. For one-bedroom types there were 4,460 (8.6) and 4,588 (7.1) last year, and 4,178 (8.2) and 3,796 (8.1) this year. Large houses having more than three bedrooms numbered 875 (1.7) and 1,117 (1.7) in 1952, and 679 (1.3) and 759 (1.6) in 1953.

For houses only, the corresponding figures are—1952—three bedroom 25,289 (61.7) and 32,787 (62.4); two bedroom 13,375 (32.7) and 17,108 (32.5); one bedroom 1,566 (3.8) and 1,620 (3.1); more than three bedrooms 720 (1.8) and 1,055 (2.0). 1953—three bedroom 26,303 (65.1) and 24,350 (66.5); two bedroom 12,192 (30.2) and 10,424 (28.5); one bedroom 1,351 (3.3) and 1,160 (3.2); more than three bedrooms 575 (1.4) and 661 (1.8).

Coronation Sales

Sir David Eccles informed Mr. Llewellyn that the receipts so far from the sale of coronation materials used in the Abbey and the annexe were £41,000, and of decorations on the processional route £7,500. In addition,

furniture and materials from the Abbey were on offer to applicants to a total value of £13,000 but payment had not yet been received. The remaining decorations, mainly from the processional route, would be sold on the basis of tender or by auction. (Nov. 16.)

Appointment of Historic Buildings Council for Scotland

In the House of Commons on November 17, the Minister of Works was asked if he would announce the membership of the Historic Buildings Council for Scotland.

The Minister replied:

The Secretary of State for Scotland and I have now appointed the Historic Buildings Council for Scotland. As I informed my hon. and gallant Friend the Member for Aberdeenshire, West, on October 27, Lord Dundee has consented to serve as Chairman of the Council. The members, who have all been appointed in a personal capacity and not as representatives of organizations, are:—

Chairman: THE EARL OF DUNDEE, D.L., J.P., M.A.

Members: THE COUNTESS OF HADDINGTON; SIR JOHN D. IMRIE, C.B.E., J.P., M.A., B.Com., F.R.S.E., F.S.I.A.A.; MR. DOUGLAS JOHNSTON, Q.C., M.A., M.P.; MR. IAN G. LINDSAY, B.A., F.R.I.B.A., A.R.S.A.; PROFESSOR ROBERT H. MATTHEW, C.B.E., A.R.I.B.A.; THE LORD POLWARTH, T.D., M.A.; MR. A. A. TEMPLETON, C.B.E.

Applications for Financial Aid

The Secretary of the Historic Buildings Council for Scotland is Mr. David Watson, of the Scottish Headquarters of the Ministry of Works. Applications for financial aid under Part I of the Historic Buildings and Ancient Monuments Act, 1953, for buildings of outstanding historic or architectural interest in Scotland should be addressed to The Secretary, The Historic Buildings Council for Scotland, 122, George Street, Edinburgh, 2.

Royal Society of Arts
Silver Medal

Sergei Kadleigh, A.A. Dip. Hons., A.R.I.B.A., received a silver medal at the opening meeting of the 200th session on Wednesday, November 18. The medal was presented by H.R.H. the Duke of Edinburgh, President of the Society, for the paper read before the Society on March 11, called "The High Paddington Scheme."

ADDENDUM

In connection with the L.C.C. South Bank Development Scheme, which was illustrated in our issue of October 22, 1953, the following were also members of the Design Team but are now engaged on other work. The names are: D. Medhurst, D.F.C., A.R.I.B.A.; T. W. Bliss, A.R.I.B.A.; and I. M. Purdy, A.R.I.B.A., A.M.T.P.I.

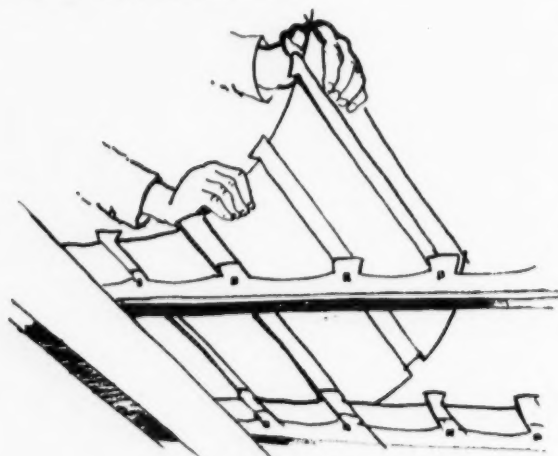
An Impression of the Building Exhibition

by DAVID JENKIN, M.A., A.R.I.B.A., A.M.P.T.I.

Sketches by G. Earle Wickham, A.R.C.A.

WRITING at the end of a day's whirl around the Building Exhibition my chief impression is that while this is not one of these introducing startling inventions or displaying a galaxy of brilliant stands, it does represent a very typical cross-section of the best in the way of building products, presented for the most part adequately. Not very long ago we were delighted with a stand just because it was contemporary in design. Now we tend to take contemporary design for granted, though we shouldn't. The very fact that there are so many stands which at least pay lip service to contemporary design must not blind us to the dull and superficial character of so many. The few progressive stands of bygone years were so because of the vitality of the designer. At every exhibition someone writes about the confusion of stand design. Though some very minor tidying up has taken place of recent years I should like to see a real effort being made with much more collaboration. Why not make over one hall to the Modular Society boys and see how its works?

I found my attention centring almost at once on the more definitely structural exhibits.



Fural roofing

One of the most interesting of these was FURAL aluminium roof cladding on the stand of S. W. Ronald & Co. The makers claim that this is a complete revolution. I certainly have never seen the zip-fastener technique applied to roofing before. It all appears to be very simple, the aluminium fixing strip shaped with a dovetail key is nailed to the side of wood battens. The roof, which is pressed in the factory to the complementary shape, is rolled on and pressed into the dovetails. The demonstration appeared to be very convincing. The makers could not give an idea of cost, but were very definite that it would be competitive. There were photographs on the Stand of its use on the Continent since 1949. The fact that it was used by Le Corbusier in his own villa at Vevey in Switzerland as horizontal wall panelling will be an additional commendation. It can be laid down to 6° pitch and is supplied in rolls 90ft long by 27in wide, including a 3in overlap.

Newsams, of Lincoln, are showing a very recent development in floor and roofing structure, TROFDEK, consisting of plywood and battens glued and nailed in trough formation. The battens are at 16in centres. There is a section on show

which you are invited to lift. I was surprised at its lightness. The makers consider that it would be particularly useful where you want a lightweight structure which can be quickly erected. It is made in four depths which form roof spans varying from 12ft to 24ft and domestic floor spans 10ft to 20ft 6in. With reduced spans it is also recommended for schools. The air pockets formed by the troughs of the structure, which can be filled with insulating materials, make it relatively easy to insulate thermally. The soffit, when left uncovered, presents quite an attractive appearance in its natural form. Examples on the Stand show it in use with pitched roofs, with slates or tiles as well as flat roofs. The firm consider that it can compete in cost with traditional construction, especially where there are large areas and spans of 15ft or over when the full impact of economy would show itself. Because it is entirely of wood, you can nail or screw anything to it.

C.D. PRODUCTIONS have constructed their double stand out of the PUNT system of prefabricated timber construction. Each stand represents a different type of construction. Mk. I system involves the use of light long span roof units in conjunction with beams and columns. Mk. II uses the same roof units on load bearing panels solid and glazed. The scheme was patented by Mr. Collins of C.D. Productions and was then developed by Ove Arup and Partners, which accounts for the smartness of its appearance, including detailing. It uses East African hardwoods throughout. Several schools have already been built, including two for the Hertford County Council. The sculpture was specially designed for the Stand by Oliffe Richmond.

This Stand is very spacious and I found my way in by stumbling over the many tired customers of the adjoining Lyons Buffet who were sitting in rows on the steps. Why are there no seats this year? The seats last time in the Gallery overlooking the Grand Hall were very much appreciated.

Punt Roof Stand



Wood seems to be staging another comeback at the TIMBER DEVELOPMENT ASSOCIATION'S Stand in which the recently developed T.D.A. rigid frame is used as a feature. Photographs there show a developed prototype in the form of a Dutch barn on the Chatsworth Estate. The principle of the frame is simply normal timber scantlings glued together and bolted. No specialist work is necessary and the work can be carried out by any competent contractor. Architects who wish to consider this type of design can obtain instructions on the method from the Stand. Its applications would seem to be very wide, from industrial buildings to village halls. Here are some points that occurred to me after discussing it with one of the Representatives: 1. Highly fire resisting because it has a small surface area and a large mass. 2. The shape of the member can be varied as in laminated construction. 3. Hardwood or softwood can be used. 4. Its design possibilities appear to offer much scope as the photographs on the Stand will indicate.

Incidentally, do not mistake the electric cables slung from the roof of the National Hall for wires connecting the ridge of the Stand to skyhooks, as I did when I first saw it. It is a pity that such a crude way of carrying simple services to the Stands should still be employed, especially when there are so many systems to choose from in the exhibition!

SCAFFOLDING (GREAT BRITAIN) perform a public service by supplying the public staircase to the Grand Hall Gallery constructed very simply out of welded steel. I thought I recognized it as the staircase used at the last Exhibition and I was right. It is built up in separate welded units which are bolted together at Olympia, making it very easy to dismantle afterwards and use again and again with a different Stand designed around it.

Another public benefactor who this time supplies vertical circulation to the gallery of the National Hall is the COSTAIN CONCRETE Co. This staircase is formed mainly of prestressed units. Walking up the elegant treads with a slight stamp of the foot you can appreciate the resilience caused by the prestressed wires which have the effect of springs.

These stairs lead up to the impressive show by the Prestressed Concrete Development Group of the Cement and Concrete Association. It occupies the whole of the east end of the National Hall Gallery and is said to be probably the most comprehensive display of prestressing ever staged. There is a note about this exhibit elsewhere in this issue. Make a point of attending one of the daily demonstrations of prestressing on the Freyssinet, Magnel-Blaton and Lee-McCall systems. While you are there do not miss the Information Stand where literature can be obtained on the many different systems.

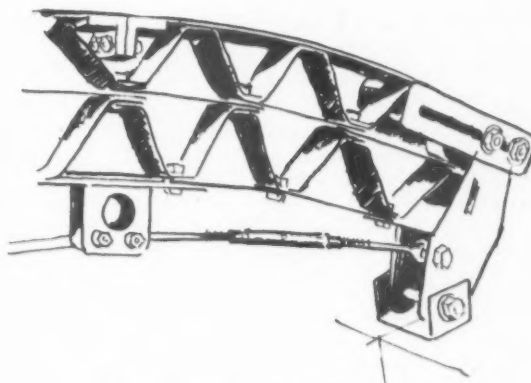
Several scaffolding firms have been working at ways of reducing the forest of poles under *in situ* concrete suspended construction. Of these there were two that interested me especially.

RAPID METAL DEVELOPMENTS have an adjustable beam of simple and inexpensive construction capable of supporting concrete slabs of average dimensions and spans without propping.

KWICKFORM have introduced FLEX-BEAM which is used as curved roof formwork support. This can be adjusted quite simply to any reasonable radius and is designed to span from gutter to gutter in barrel roofs.

The square hole digger demonstrated in real earth and stone on the GUTTERMAN Stand should be studied by those contemplating using short bored pile foundations. It is a neat contrivance for digging holes up to 18in square and down to 12ft deep. For the shallower types two men operate it and for the deeper ones three men. It forms a level bottom to the hole.

While strictly a piece of plant without much effect on the design of your buildings the NO-BOLT TUBULAR SCAFFOLDING was interesting to watch. The speed with which the



Kwickform "Flex-beam"

parts were built up reminded me of children's constructional toys, so quickly was it done—and equally quickly dismantled. It occurs to me that there may be a use for this for children's climbing frames, built-up stages, and similar semi-permanent erections.

Those with expansion joint problems in concrete work are directed to the EXPANDITE Stand. Here are details of double protection against water seepage at expansion joints. The water stop embedded in the centre across the joint is in rubber or P.V.C. The rubber is used where considerable movement is to be expected as in expansion joints and P.V.C. for construction joints where little movement normally occurs. They have joints for all kinds of purposes and I strongly recommend their careful study.

Three Stands away, Sika were attracting a crowd with a very dramatic show. Two men in waterproofs were sealing an Architect's-nightmare-of-a-leak in a basement. The water was gushing out through the concrete in gallons per minute. The whole process of sealing this was demonstrated, working from the bottom upwards, with the final triumphant completion of the water barrier.

Also attracting large numbers was the NURALITE stand. This is a quite new substitute for sheet metals in roofing and flashing. If its life is that claimed, it should be a suitable substitute for metal where cheap roofing and flashings are wanted. It is flexible and weldable, yet non-metallic. You should see their demonstration, even if you cannot entirely endorse their claim that it supersedes metal for roofing!

Everybody will, of course, visit the D.S.I.R. Stands in the Gallery of the Grand Hall. The Stands touch on subjects such as lightweight concrete blocks, damp walls, fire resistance, heating and colour in schools and concrete mixes. The leaning chimney will come as a timely reminder to those who forget to practise their B.R.S. Digests. There is a model showing the use of a rail-mounted tower crane in house building. During the winter of 1952-53 this was used on a typical Local Authority Housing Scheme of 32 houses in co-operation with the City Engineer at Norwich. Man hours were reduced from 2,800 to 1,800 per house and the total saving per house, even allowing for the cost of the crane, was £100. I wish there were more ideas of this type on show throughout the Exhibition.

For me personally one Stand appealed far beyond the others. That was EASTWOOD'S Stand designed by Stillman & Eastwick-Field. The simplicity of its form stands out amidst the confusion around. It is not shoutingly original but a sensitive statement in the black-painted steel frame tradition. It is planned in two floors with plenty of room downstairs and the upper floor consisting of a collection of Builders' Merchant's samples. The details were well designed also. I liked the use of the electric conduit snaking decoratively over the ceiling and serving as support to the John Reid lighting fittings. The wide precast concrete stair-

An Impression of the Building Exhibition

case is, I understand, a product of the firm. It is suitable for free standing use. On such occasions the perimeter section of treads and risers is very important and you will notice how sensitively this has been designed.

Next door is the only Clock Stand in the Exhibition. Anyone who has tried to design a clock face realizes how much harder it is than you expect it to be, and I suppose that includes all Architects, since there are so few good ready-made clocks to choose from. Last time I had a heated argument with a representative on the Stand of ENGLISH CLOCK SYSTEMS, LTD. I had declared in no uncertain terms that there was not a decent clock on show in the whole Exhibition including his own stand. He loyally arose in defence and had about the only attack possible which was to ask me who I was to pronounce so pontifically on design. This was unanswerable but I am glad to see, though I do not take the credit for it, that there is a special section devoted to new designs for SMITHS SECTRIC standard clock faces. These designs, worked out in their own department, do represent quite a step forward compared with many. What pleased me particularly was to find that the display was an experiment to find out what Architects think. Here is your chance to contribute positively to a much neglected field of design. So go along and give your own criticism. Tell them what you think of the hands, figures, cases, or the whole lot.

There were quite a lot of innovations in floor finishes. NAIRNS are introducing the NEWHOUSE Tile which is thermoplastic made with P.V.C. resin and mineral fillers. Abrasion test gives a very favourable comparison with very hard floorings. They recommend $\frac{1}{8}$ in for domestic use and $\frac{1}{4}$ in for heavier. The $\frac{1}{8}$ in floor is laid at approx. 14s per sq yd and the $\frac{1}{4}$ in at 22s. Colours do not affect the price and some attractive shades are on show.

THE NATIONAL FLOORING CO. have a small exhibit of PROMOFLEX, a P.V.A. emulsion flooring with silicates and sands mixed in with it which has been used in Germany since 1946. They claim it to be oil and petrol proof. It can be laid on any type of floor provided the usual precautions are taken. There are basic sub-coats for levelling off on rough floors and the final coat is sprayed on to $\frac{1}{8}$ in thick. On a screed with steel float finish you can put a sealer and then spray direct, using normal spray equipment. The cost would be around 10s a sq yd laid. It dries overnight.

AERO RESEARCH introduce an attractive wood veneer floor 3 to 4 millimetres thick which is glued in tile form to a resin-bonded sand base, having the advantage and appearance of a wood floor and also being stable and inert. Various tests are on show. Cost would be 22s 6d laid. A great point is that this floor can be laid by any builder who can lay a quarry tile well.

Another entirely new floor surfacing is ROFLEX by L. FISHBURN. On a rough floor of concrete or wood a preparatory surface is laid consisting of a Latex compound. The ROFLEX resin surfacing is then spread $\frac{1}{8}$ in thick with a trowel. It can be laid by local plasterers. What interested me was the flexible character of the material. A photograph showed where it had been used with a carborundum surface; a non-slip finish for a sloping entrance to a Railway Station, where passengers had tended to slip previously. It appeared to me that its flexible nature might make it particularly useful in conversions where you cannot rely on the wood floor not to deflect. The makers recommend it for canteens, offices, schools and hospitals. On a prepared steel trowelled surface it would work out at about 14s 6d a sq yd laid $\frac{1}{8}$ in thick.

I noticed quite a number of overhead garage door systems. They were all very featherweight to handle.

ACROW'S "UP AND OVER" Garage Door Gear is made in two models. Model No. 1 is a very simple fitting which needs $\frac{1}{8}$ in clearance above the door head. It costs about £10 6s 2d. Model No. 2, which needs only $\frac{1}{4}$ in clearance to ceiling, costs about £11 9s 3d. The gear can be fitted to existing garage doors, but if you do adapt them be very sure that the combined door can span the width of the garage when it is lying horizontally.

WESTLAND ENGINEERS supply the WELPRISE Pressed aluminium overhead garage door which is door and gear combined. It costs £22 to £24 for an average size.

An advantage over these other doors where you are tight for headroom near the door in your garage is BOLTON GATE'S aluminium alloy GLYDOVER which can be had complete for about £30 and is remarkably neat in operation. An elaborate version of this, 16ft wide by 7ft high, electrically operated, is also on show.

While on special door ideas, note the two-way sliding folding door by the CLARK ELLARD ENGINEERING CO. This ingenious door can be opened, turned at right angles and then closed over a similar opening at right angles to the first. There may be a future here for people who like to change their rooms around.

Among the many domestic doors to be seen are the lattice and solid cored flush veneered models on the stand of Lata Doors & Products, Ltd. The sole selling agents for these doors are Duncan Ewing & Co., Ltd.

The Perspex Dome Lights on the I.C.I. Stand are much lighter than their glass counterparts and relatively cheap. The weight is less than 1 lb per foot super. They are obtainable rectangular or circular up to 4ft across the opening.

This year the BRITISH ELECTRICAL AND ALLIED INDUSTRIES RESEARCH ASSOCIATION is featuring THE HEAT PUMP. There is a working model of a small Heat Pump using air as the working medium, as well as one of the Heat Pumps at the Royal Festival Hall. The trouble, of course, with a Heat Pump where you have not an unlimited supply of motive power is that you have to burn fuel anyway, but obviously every case must be considered on its own merits. They are also showing a dual purpose Heat Pump which cools the refrigerator or larder and uses the hot air to heat an insulated hot water tank. Nothing is lost, not even the heat from the electric motor. And talking of heat, there is also window and door sealing against draught and consequent heat loss, represented by several firms, including SEAL DRAUGHT. This is a firm who do the job themselves believing that it is essential that such work be done expertly if it is to be effective. Questioned on the economics of it specially done for a single house, the representative pointed to the map of England showing widespread disposition of agents who could come and do it.

As usual, ADAMSEZ show some delightful sanitary fittings —though I cannot understand how the same people can be concerned with so unfortunately designed a Stand. The LOTUS is certainly a lovely basin until you get to the bottom of it where the cantilevers are definitely an anti-climax. They just do not fit the sweep of the rest of the design. The representative told us how the firm had been trying to obtain more suitable brackets and it is to be hoped that they will ultimately be successful. This is indeed extreme criticism since I think we all admire ADAMSEZ for the pioneering work they are doing in good contemporary design in this direction.

Before you go don't forget to visit the A.B.N. Stand where you can see "HIGH PADDINGTON" and make up your mind about it, the A.B.T. Stand where you can buy your diary, the A.B.S. Stand where you can buy your Christmas Cards, and the Westminster Abbey Stand where you know just what to do.



Ceiling "stars" are gold anodized aluminium with hooks inside for suspended displays.

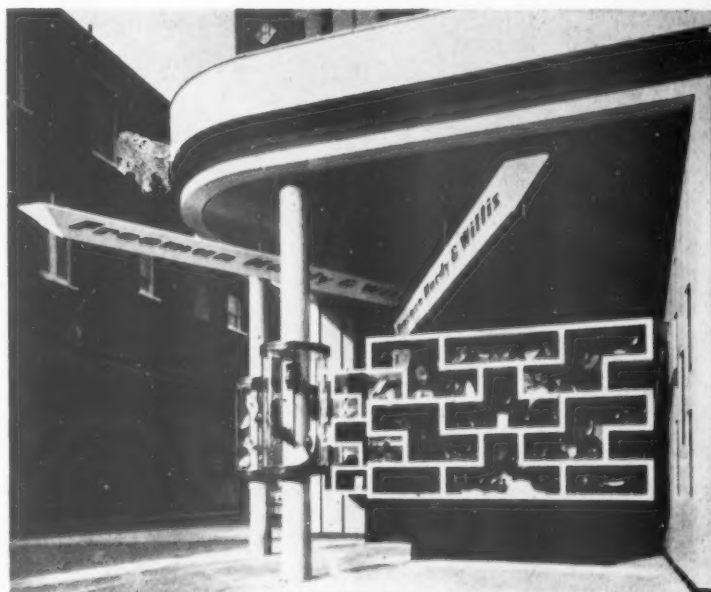
SHOP AT CATFORD, S.E.6

architect: PATRICK GWYNNE

THIS branch of the well-known shoe firm is in a busy shopping street at Catford, London S.E.6. It has been remodelled and introduces a number of new design features. The new layout of the very narrow premises (14ft 6in at the widest) incorporates a set-back shop front whilst maintaining the previous seating and stock capacities, and providing window display areas for the fullest range of goods. One of the main features of the design is the division of the window displays into small compartments each lined with different coloured felts. The principal showcases are divided in such a way that a distinctive pattern is expressed and this acts as an eye-catching feature at a distance, whilst at the same time it assists in eliminating reflections and providing a hidden source of lighting over the whole area of the display. Rear access to these cases, and front access to the side wall windows, allow individual displays to be changed quickly without disturbing the whole window.

The layout of the front lobby area has been arranged to emphasize the free-standing nature of the showcases and by means of armourplate door, panels and soffit the shop entrance is made to appear as little of a barrier as

Banner-like signs are intended to be seen from any direction.



*Shoe Shop,
Catford, S.E.6*



The inside passage. Ceiling is grey plastic cloth. Floors are white marble linoleum, and all trims are cellulosed white. The Hosiery displays have different coloured felt backgrounds.

Display cards and tickets designed by the Architect.



Continued from page 637]

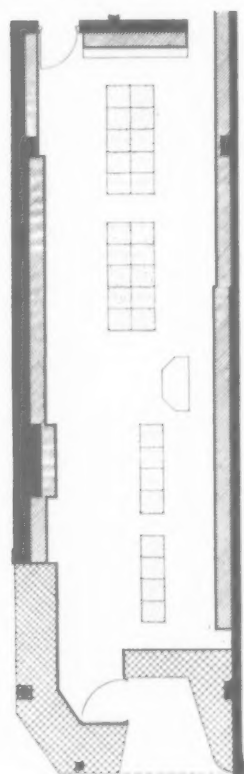
possible. The upper glazing is taken back to the line of the first fitting bay so as to reveal a large expanse of ceiling. Paving slabs to match the pavement are used to increase the open-to-street effect. The two circular columns at the front were existing, one having been increased in diameter to match the other and both carry circular displays which become visible and announce a shoe shop from certain directions before the set-back displays are seen.

A white trim and black recess provide a frame for the shop front and are surmounted by a white tile fascia, left free from lettering, to act as a distant eye-catcher. The firm's name, an unusually long one, is introduced in relatively small lettering on long banner-like signs which are made an important feature of the design. Taking advantage of the regulations applying to hanging signs, they are carried over the pavement, diagonally so that they can be seen easily by people approaching from any direction. These signs are supplemented by a triangular

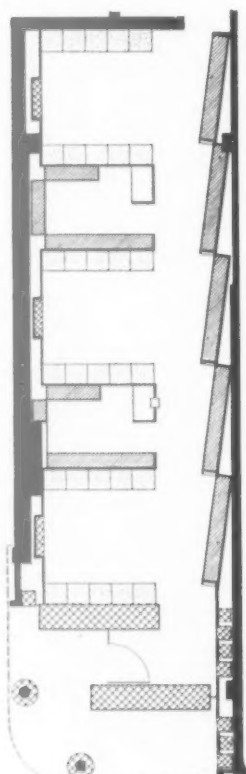
shaped, black and white "FHW", illuminated sign projected over the fascia (not shown in the photographs) which acts as a beacon from the distance.

The interior has been planned with three separate fitting bays, divided by small stock rooms. Complete segregation of the stock into out-of-sight stock rooms was not suitable in such a narrow shop and it was further considered desirable that a proportion of the shoe boxes remain in sight of the customers. The first line stock is thus in very easy reach of each department and this eases the work during the crowded Saturday shopping hours when a large proportion of the business takes place in a district such as this. In order to overcome the uninteresting appearance of a wall of shoe boxes the racks have been canted so that they are not immediately seen from the entrance and the end of each rack is used to carry a hosiery display with coloured backgrounds. The three fitting bays are identical in size and detail but are furnished in differing colours to suit the department concerned.

PREVIOUS LAYOUT

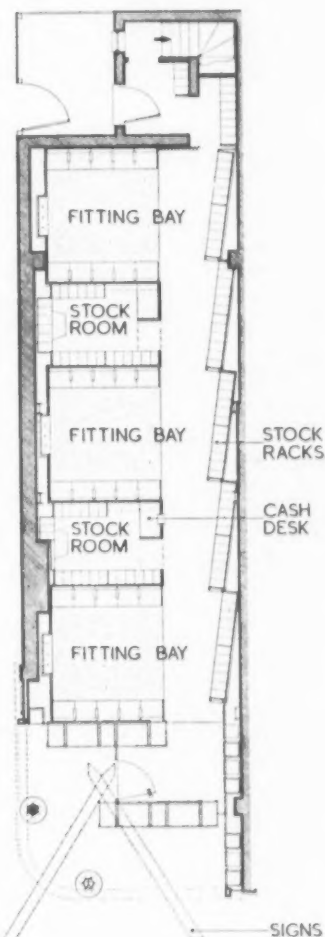


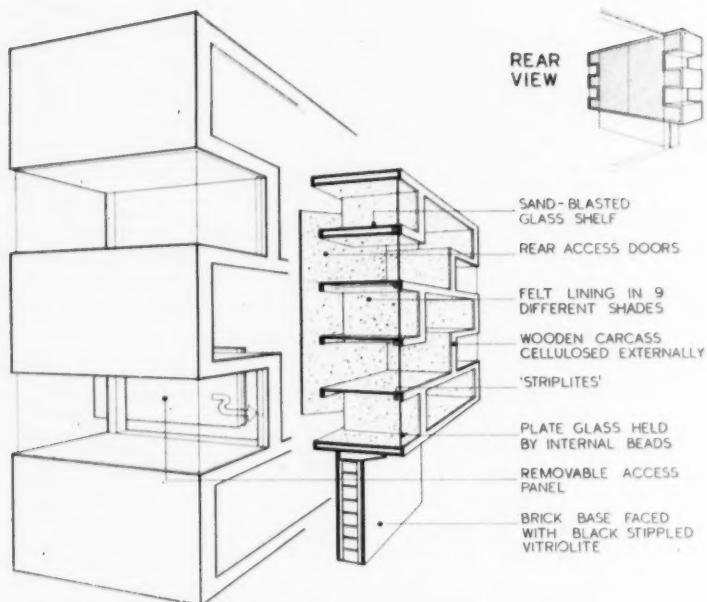
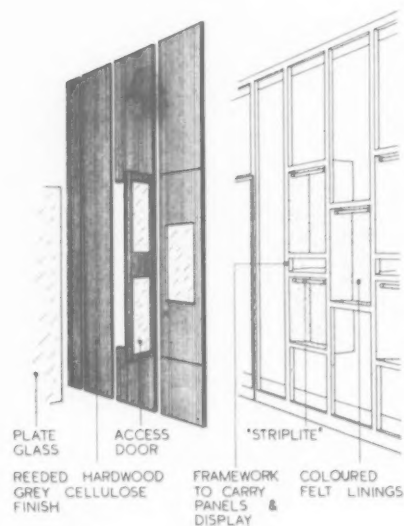
NEW LAYOUT



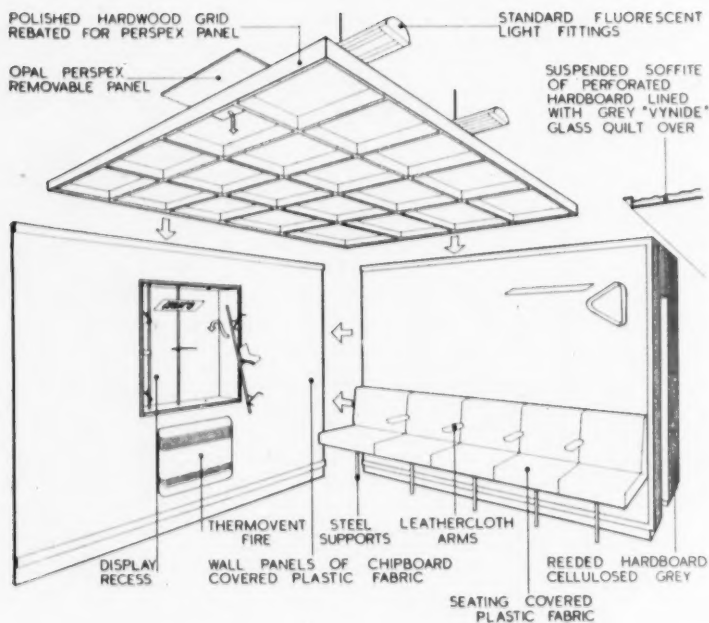
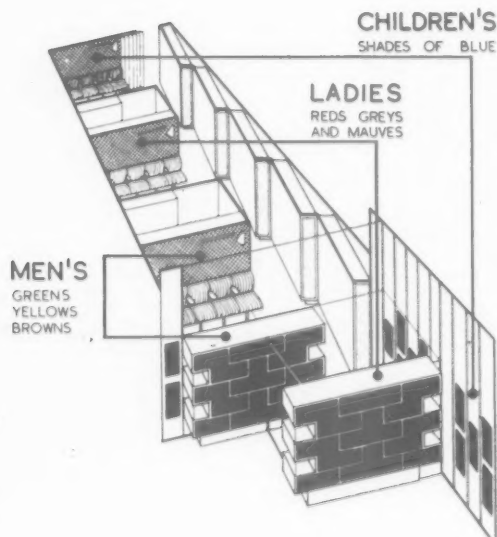
STOCK  SEATING  DISPLAY 

PLANS



Shoe Shop, Catford**DISPLAY CASE****WALL DISPLAY**

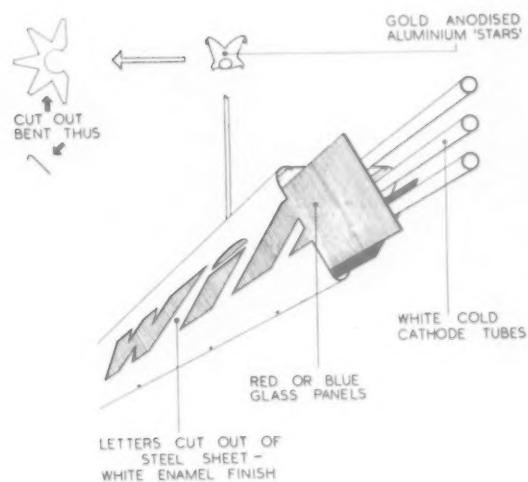
All fitting bays are identical but with different shades for seat coverings, walls and carpet. Photographic displays are tinted to the colour theme of each bay, and are changeable.

**FITTING BAY****COLOUR LAYOUT**

Shopfitters: A. Davies (Shopfitters) Ltd.

Signs: L. Bloom

Door handle, reminiscent of the shape of a shoe, is covered with brown calf leather on a wooden core.



MAIN SIGNS



NEW FACTORY AT WESTWOOD, MARGATE.

architect: HARALD WEINREICH, A.R.I.B.A.

assistant architect: W. A. E. SEWELL, A.R.I.B.A.

assistant: H. W. POWLEY

THIS factory was the first to be erected for the Margate Corporation on their Industrial Estate at Westwood, about two miles from Margate on the Ramsgate Road. It was planned to the special requirements of the Klinger Manufacturing Company Limited to supplement the hosiery production of their Edmonton factory. In all, a site of about ten acres was earmarked for the development, which is to proceed in stages, and a master plan was prepared based on the manufacturing processes and the flow of materials. The final scheme deals with the complete process from the delivery of the yarn to the despatch of the final products, including all ancillary departments, as well as administration and welfare buildings. Special care was taken to allow for independent extension of any part of the plant without affecting other parts, so that it will be possible to balance the production at every stage in the light of the Clients' requirements at the time.

Phase I

The first phase embraces all departments from intake of raw material to, but not including, the dyehouse, and is illustrated on the block plan and in the architect's perspective. The knitting shops, of which four were built at this stage, are all on the elevated ground floor, with a basement below, which will be used for bicycle and other storage. The multi-storey block will house all processes after knitting, and before dyeing, and the work will be conveyed through the departments from the top floor to the other floors by means of gravity chutes.

The future Yarn Block will deal with the raw materials until they are required for knitting. The Loading Bay in the rear will, for the time being, be used for both unloading materials and for loading goods but, in the final scheme, a similar loading platform will be provided adjoining the despatch department at the other end of the production line opposite to the present bay.

In the first stage, only the nucleus of the first phase scheme was built, based on four knitting shops (with all ancillary services), the beginning of the Rough Finishing Block (with the main stairs and cloakrooms), and the Entrance Block, which is the centre of all internal traffic and also houses the production offices.

Knitting Block

The knitting shops are so arranged that they can be used as one large shop or split up into four self-contained units, with passages between them giving access to each shop both at this and any future stage. Each knitting shop has been designed to take various machines in groups most suitable to the many types of production, and this flexibility has been maintained in the arrangement of adjustable trough lighting and in the interchangeable plugging-in points for power in the ring mains fixed to the ceilings in the basement below. Each shop is individually air-conditioned so that any process can be given the most suitable climate. The northlights are only four feet high and double-glazed, so as to reduce to a minimum the areas of excessive heat transmission and are set vertically to eliminate glare.

[Continued on page 646]



for the Klinger Manufacturing Co., Ltd.



An aerial view of the completed first stage, the nucleus of the first phase of the development scheme.

Consultants :

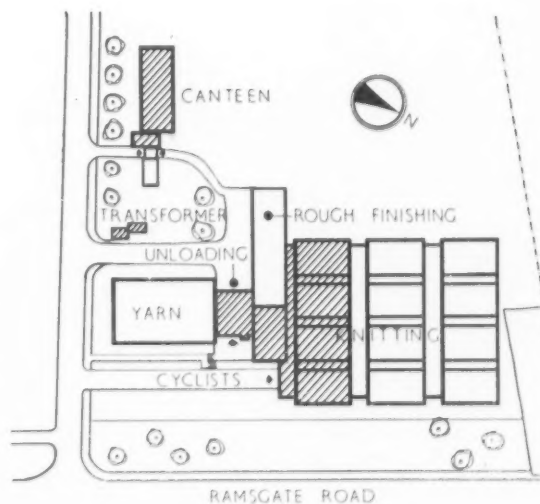
Structural Engineer : Dr. K. Hajnal-Könyi.

Assistant : P. J. Goodwin.

Quantity Surveyors : Messrs. E. C. Harris & Partners.

Clerk of Works : D. Pollock.

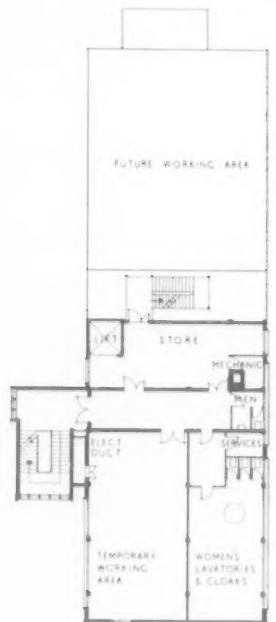
On the facing page is a perspective view of the completed first phase scheme. This is shown in block plan on the right with completed buildings hatched. Special care has been taken to allow for independent extension of any part of the plant without affecting other parts. Thus it will be possible to balance production at every stage in the light of the client's requirements at the time.



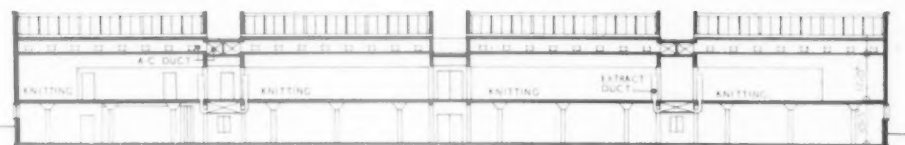
An aerial photograph of the Naval Air Station at Alameda. The image shows a large hangar with a corrugated metal roof on the left, a central control tower and administrative building, and a long, low building with many windows in the foreground. The station is situated on a body of water, with a breakwater visible on the right.

Bricks: Facing: G. Tucker & Son, Ltd. **Deadlights over Loading Bay:** Mellows & Co., Ltd. **Doors:** R. Cattle, Ltd. **Electrical Installation:** Electrical Equipment Co., Ltd. **Electric Shutter Gate:** Bolton & Co., Ltd. **Expansion Joints:** Expander, Ltd. **Flooring:** Holborn Asphaltic Co., Ltd. (Cork); Macnab & Co. (Flooring), Ltd. (Magnesite). **Heating & Air Conditioning:** Carrier Engineering Co., Ltd. **Heater Cabinets & Motors:** Linn Lugs, Ltd. (Mal-works), Ltd. **Ironmongery & Lettering:** Comyn Ching & Co. (London), Ltd. **Joinery:** Rice & Son, Ltd. **Lagging:** Climax Insulation & Packing Co., Ltd.; Newalls Insulation Co., Ltd. **Lights:** Linn Lugs, Ltd. **Lighting Conductors & Flagpole:** J. W. Gray & Co., Ltd. **Limpet Asbestos Spray:** Turners Asbestos Cement Co., Ltd. **Mahogany Handrails:** F. J. Lewis, Ltd. **Metal Windows and Door Frames:** Williams & Williams, Ltd. **"Fibrolite" Windows:** J. W. Oil Burners. **Todd Oil Burners, Ltd.** **Paints:** Ferguson Edwards, Ltd. **Precast Concrete Window Frames:** Lencsrelet, Ltd. **Radio Installation:** Redifusion, Ltd. **Railings & Escape Stairs:** Haywards, Ltd. **Reinforcement:** Twistel Reinforcement Co., Ltd. **Roads:** Rice & Son, Ltd. **Roofing:** F. McNeill & Co., Ltd. **Sanitary Fittings:** John Boldings & Sons, Ltd.; Wm. E. Farrer, Ltd.; A. Olby, Ltd. **Sanitary Incinerators:** Hunslet Metal Manufacturing Co., Ltd. (Internal & External); Carter & Co. (London), Ltd. **Woodwool Slabs:** Gyproc Products, Ltd.

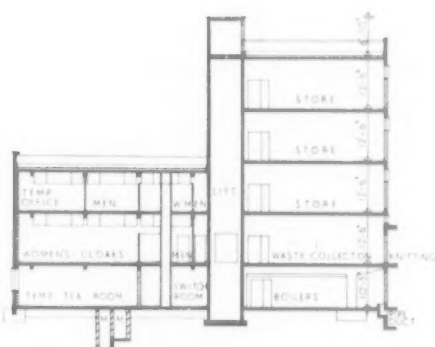
This aerial view shows the north-light windows in the barrel vaults.



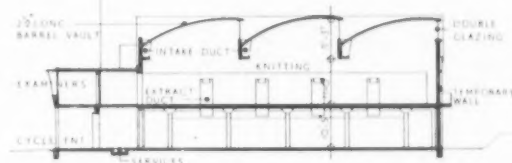
UPPER FLOORS



LONG SECTION KNITTING BLOCK



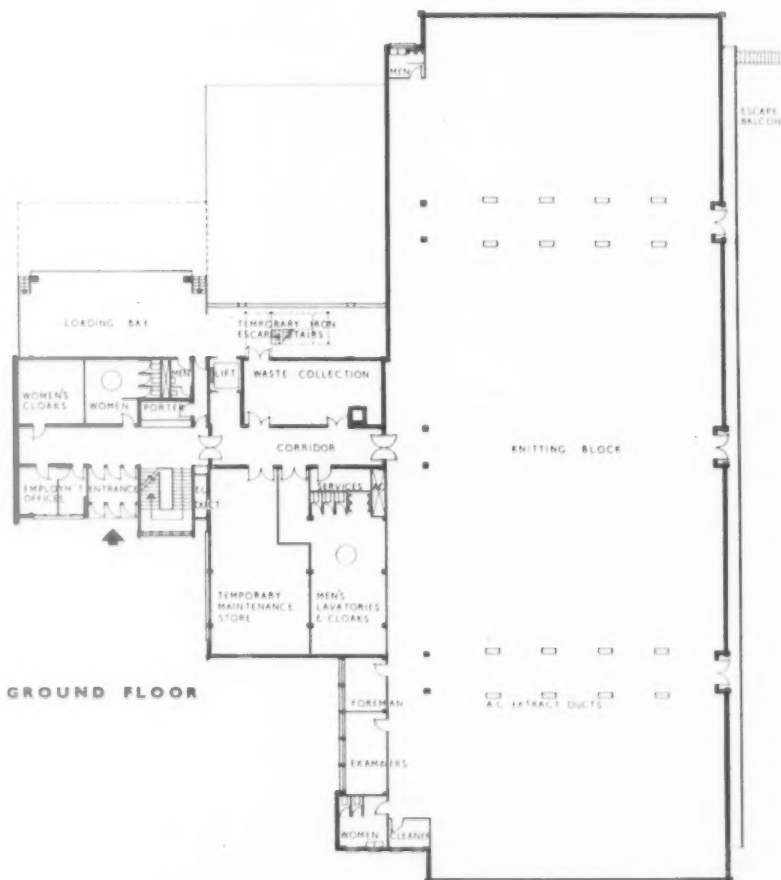
CROSS SECTION, ROUGH FINISHING



CROSS SECTION KNITTING BLOCK



FIRST FLOOR



GROUND FLOOR

New Factory at Westwood, Margate

Continued from page 642

Rough Finishing and Entrance Blocks

The basement accommodates the air-conditioning plant and the boiler room, sufficient in size to heat the next extension to these blocks. The switchroom, also situated here, has been arranged to take equipment for power and light to serve all possible requirements of the first phase. On the upper floors, the Rough Finishing Block houses mainly temporary workshops, which will be used as cloakrooms once the permanent workrooms have been added at the rear of the building.

The minimum number of W.C.s has been installed on each floor but provision has been made for this to be increased as and when the need arises. Equally, the number of the washing fountains can be trebled if required. While all cloakrooms are on the workers' way between the stairs and the shops, additional sanitary facilities are scattered throughout the building, and placed close to the work areas. The temporary offices at the rear of the Entrance Block will later be converted into cloakrooms for the use of the workers in the future Yarn Block.

Under the Loading Bay a space has been left for a pneumatic tank, if this should be required to boost the pressure of a sprinkler installation.

The escape stairs at the rear of the Rough Finishing Block can be easily dismantled and re-erected in any position depending on the number of bays by which this block is extended.

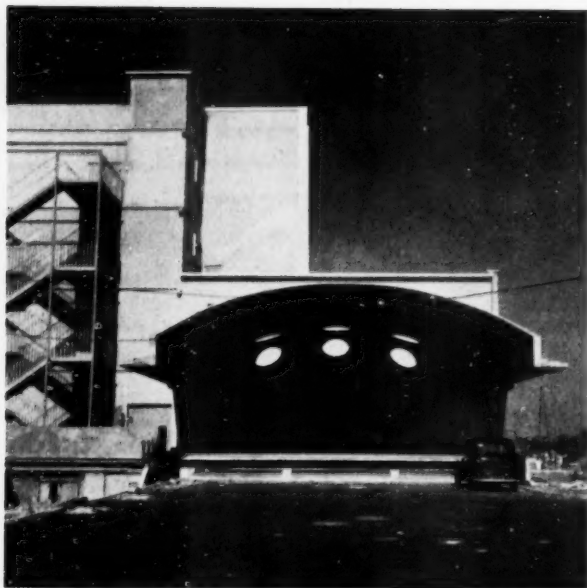
Services

As mentioned before, all services start in the basement of the Rough Finishing Block. From there the electric mains rise through their own duct beside the stairs to feed the multi-storey blocks. Adjoining this duct, and accessible from every landing, are fuse cupboards, each controlling the power and light supply on their respective floors. The Knitting Block is fed through separate trunking and ring mains fixed to the basement ceiling. Provision has also been made for music-while-you work, clocks, a call system, and telephones.

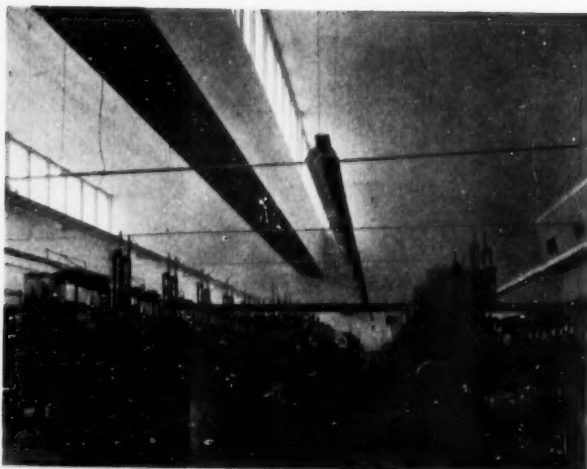
All pipes are grouped in special service rooms arranged one above the other, topped by the penthouse with the water storage tanks. In this way, all services are fully accessible only to the maintenance personnel. Also through these service rooms runs the flue for the sanitary incinerators, fixed in the W.C. cubicles on each floor.

The knitting shops are fully air-conditioned, the remainder of the building is heated by radiators, and both are fed by low pressure hot water from the same oil-fired boilers.

The fresh air is taken in through an opening in the East wall and, after passing through various stages of treatment, is blown by a fan into the Plenum Chamber. The four by-pass heaters in the Plenum Chamber allow each knitting shop to be supplied with its own climate. From there the air proceeds through the ducts above the



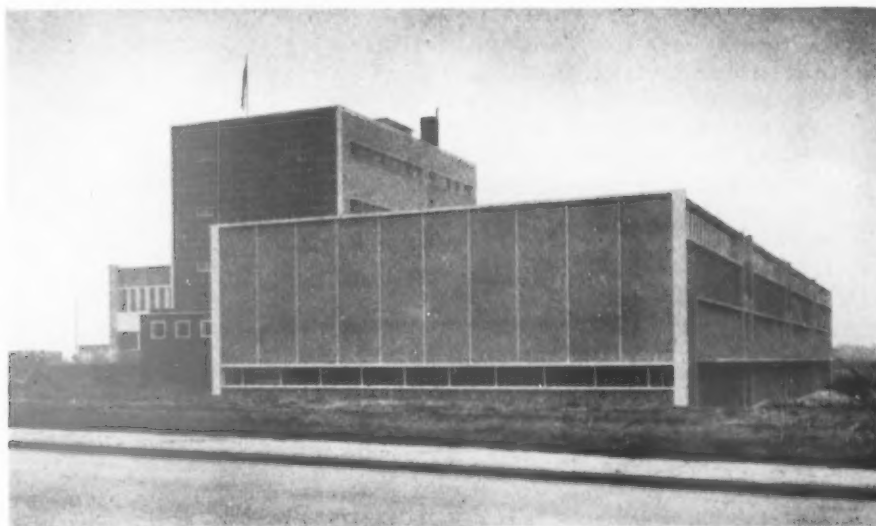
The loading dock.



Knitting Shop interior.

Basement under Knitting Block showing column heads.





General view from North-East.



North elevation of the Knitting Block.

passages between the knitting shops, and is distributed to the three inlet ducts incorporated in the barrel vaults in each knitting shop. Finally, it is blown at low velocity over the work areas. The used air enters the return duct through special inlet columns, and flows under the basement floor to an opening immediately below the fresh air inlet, so that it can be re-used either on its own or mixed with the outside air, depending on the external conditions of temperature and humidity.

The Passenger-Goods lift has been designed to serve also the future extension at the rear and is equipped with automatically opening and closing shutters.

Construction

At this stage, the building consists of three separate blocks in reinforced concrete construction, divided from each other by expansion joints.

Knitting Block

In the four knitting shops each of the slabs carrying the heavy, yet delicate, machinery is supported in the basement by mushroom columns. The floor slabs of the passages between the knitting shops span between pairs of beams running over their own rows of columns.

The roof over each knitting shop consists of three north-light barrel vaults, with continuous rows of fixed lights in precast concrete frames. The three barrels span between two large beams, each supported at the ends by two slender columns, so that there are only four columns to each shop, measuring over 72ft \times 45ft. In this way, a working area of 210ft \times 72ft has been formed, without intermediate columns. In the two cases where these stiffening beams form external walls, i.e. at the front and rear of the block, they are carried down to the ground floor slab, and make possible the use of long strip windows in the basement under the knitting shops. The flat roofs over the passages between the knitting shops are carried on continuous ribs, and are again separated from the remaining structure by expansion joints. Where ducts are formed over these passages, the additional slabs are constructed in a similar way.

On its North side, the knitting shop floor has been extended to provide support for future additions, without the need of interfering with the existing foundations. The cantilever portion of that floor is, at present, being used as an escape balcony in compliance with the Factory Acts.

New Factory at Westwood, Margate

Rough Finishing and Entrance Blocks

These blocks are in reinforced concrete frame construction, with the voids filled in with cavity brickwork or concrete blocks, except for the East wall of the Rough Finishing Block, which is of 6in thick reinforced concrete throughout its height. The window walls to the stairs are in precast reinforced concrete construction, with double glazing.

Loading Bay

The canopy over the Loading Bay is a barrel vault roof fixed to the reinforced concrete wall at the rear of the Entrance Block, with an intermediate support of a 2-pin rigid frame with tapered columns and an upstand beam from which it projects 20ft. forward. The central portion of the floor of the Loading Bay is carried on precast reinforced concrete units, so that it can be taken out and replaced without damage to the rest of the bay if it is decided to install the sprinkler pressure tank at a later date.

Finishes and Decoration

Special care has been taken throughout the building to provide adequate thermal insulation. For example, the barrel vault roofs over the knitting shops were cast on 2in thick woodwool slabs, and finished on the

underside with $\frac{1}{2}$ in limpet asbestos spray and fibrous plaster. They are topped with three layers of bituminous felt and coated with aluminium paint. Throughout the building woodwool slabs have been used to a great extent as permanent shuttering.

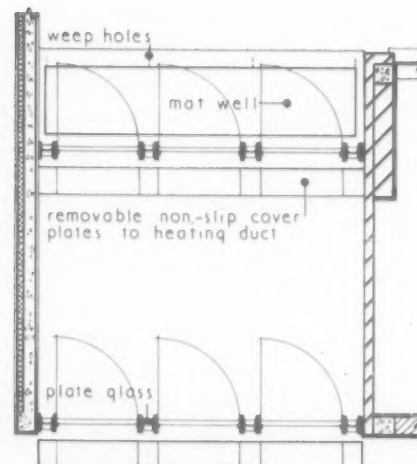
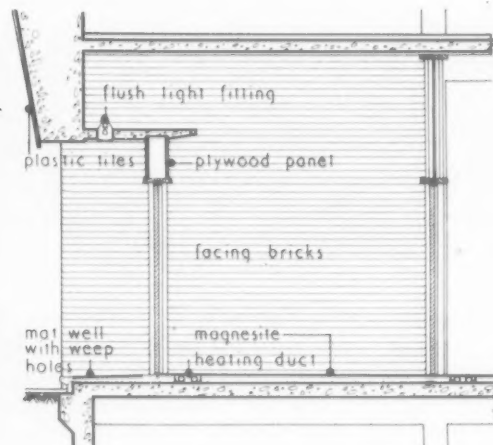
The floors generally, including the stairs, are in magnesite, except for cloakrooms, lavatories and boiler room which are quarry tiled, and the offices which are cork tiled. The storage areas have granolithic flooring.

The building is plastered throughout, and all decoration was done in emulsion paint with eggshell finish.

Externally, the building is rendered in pale grey Tyrolean cullamix, except for the tiled portions and where facing brick was used.

A comprehensive colour scheme was worked out in collaboration with the paint manufacturers which not only provides for the most suitable atmosphere in every room, but is also used for easy identification of the storey through door colours differing from floor to floor. Special regard was paid to promotion of safety and, for example, all inside faces of doors, (such as fuse cupboards, air conditioning plant, etc.) which should normally be locked, were painted signal red so as to serve as a warning when they are open.

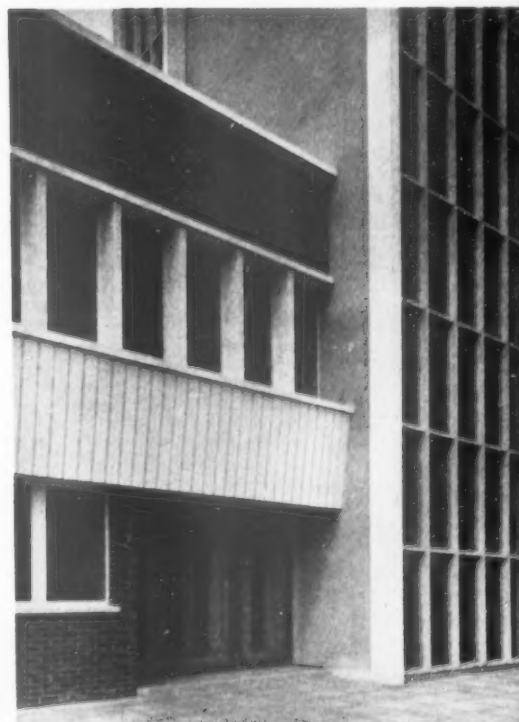
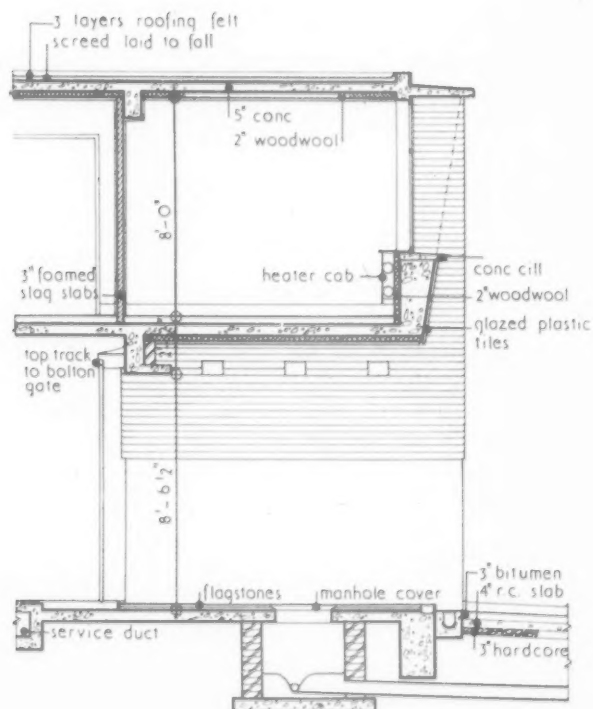
Main entrance doors and lobby details





The cherry red tiles on the East wall of the Rough Finishing Block are set in panels three wide and four high, with a wider point between the panels, and the small windows on each floor are set in white precast terrazzo surrounds. The white tiles over the cycle and main entrances are set with wider joints only in the vertical direction.

Below left, section through bicycle entrance and foreman's office.

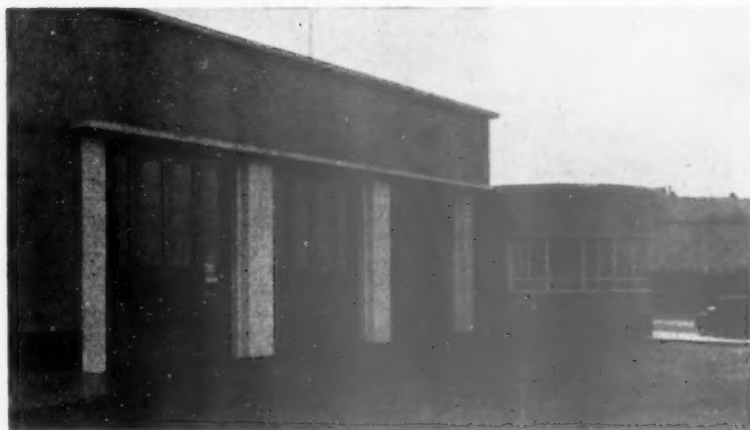


PARKHEAD FIRE STATION GLASGOW

AS originally envisaged, Parkhead Fire Station was designed with all necessary services for independent operation. It was to be of three floors in height and contained a three-bay appliance room, offices, dormitories, billiard and quiet rooms, recreation room, dining rooms, kitchen, etc., engine repair, machine and paint shop with subsidiary buildings containing plumber's and joiner's shops, etc., together with a hose tower and heating chamber.

It was decided, however, at Home Departmental level, that the original Schedule of Accommodation would have to be cut down to meet the then prevailing financial conditions and accordingly, after meetings between the Home Department and Corporation officials, it was decided to build a single-storeyed station containing appliance room and the minimum number of subsidiary apartments necessary to enable the station to be fully manned operationally, and constructed in such a manner as to permit of the upper floors being completed at a future date.

The building, as designed by the Architectural Section of the Office of Public Works and as subsequently built, comprises a three-bay appliance room set back on the angle at the junction of four roads, this situation giving appliance drivers a clear field of view in all directions as they leave the station. The wings on either side of the appliance room are con-

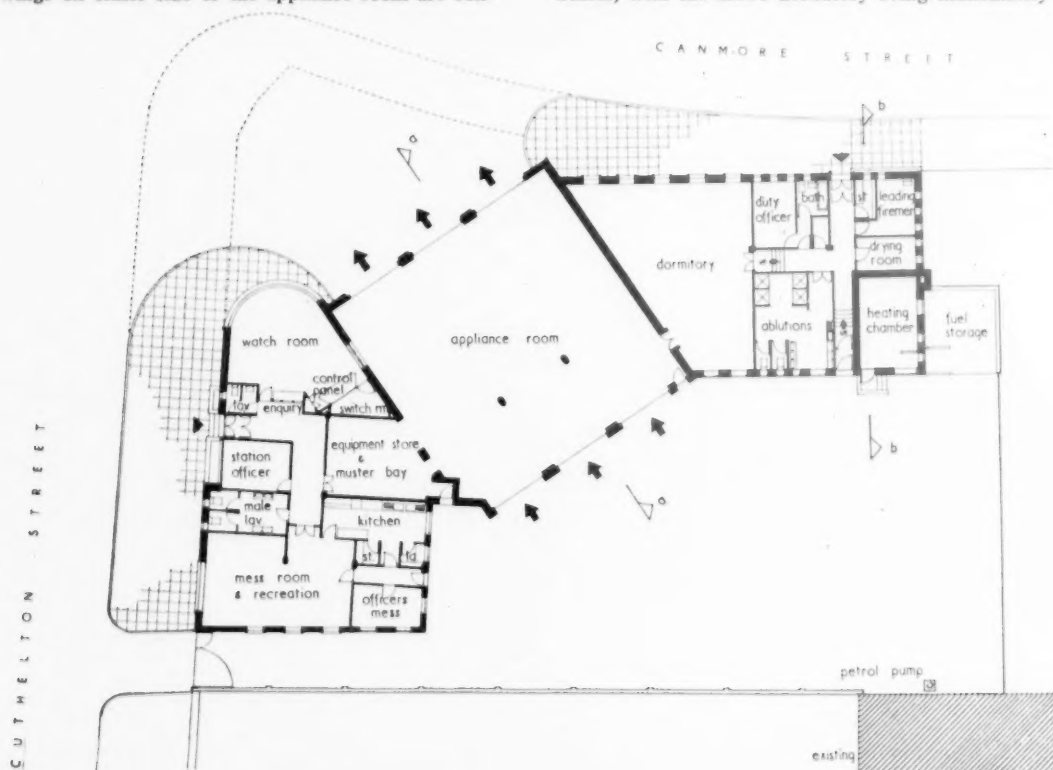


Appliance Room, Front Elevation

nected directly to it and also have separate access both to the street and the station yard.

The administrative wing on one side has the following apartments—watch room, Column Officer's office, muster and equipment bay, mess and recreation room, Officers' mess, kitchen and male and female toilets. The watch room has a large circular window overlooking the entrance doors and another window overlooking the appliance room. The watch room attendant sitting at the control panel adjacent to this window has therefore full control of all movement both inside and directly outside the appliance room. The equipment bay, which is directly entered from the appliance room, contains first reserve stores of hose reel, etc.

The dormitory wing contains sleeping and locker accommodation for the complete shift of Firemen, Leading Firemen, Section Leaders and Column Officer, with the men's dormitory being immediately

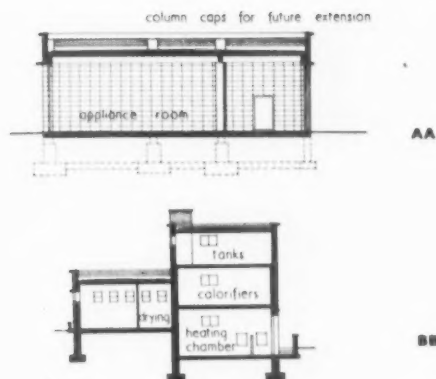




Public Entrance



Dormitory and Ablution Wing



Appliance Room

adjacent to the appliance room, together with the necessary ablution and toilet facilities and a drying room. This wing also contains a heating chamber and the water storage tank.

The rear appliance room doors open direct to the drill yard, which has access from the street for returning appliances. A petrol storage tank with pump is placed at the rear of this yard.

Construction

The building generally is constructed of load-bearing cavity walls externally, with internal steel stanchions carrying beams supported between them and the external walls. A section of the appliance room, over which the recreation room will ultimately be located, is framed with steelwork encased in concrete.

The appliance room and dormitory have an access duct passing under them, and the floors of these two apartments are built on the solid ground whilst all other floors are constructed of precast concrete units with service space beneath.

The roofs are also of precast concrete units and are designed to take the full floor loads which will be necessary for the final scheme.

Internal walls, all of which are non-load bearing, are of breeze concrete.

EXTERNAL

Finishes

The elevations are faced with Redac plastic clay facing brick built with 1in struck weathered horizontal joints. The copes, canopies over appliance room doors and side entrance doors and surrounds to windows, etc., are of cast stone. The base of the elevations facing the street, the pilasters and jambs of the appliance room doors and the features of two side entrance doors are in black and oatmeal coloured faience.

The appliance room doors are of teak, set in heavy teak frames. Each door section is two-thirds glazed with 1in polished plate glass. The side entrance doors and gate to drill yard are of teak and the inner vestibule doors are fully glazed, set in teak frames.

Window frames throughout are metal casements.

All roofs are finished with 1in asphalt, laid on foam slag concrete screeding.

INTERNAL

Appliance Room and Muster Bay

Floor finish—2in thick Rusbon tiles laid on reinforced concrete bed. The tiles are in contrasting colours to clearly indicate the safe wheel setting for appliances.

Wall finish—Faience tiles from floor to ceiling.

Ceiling finish—Hardwall plaster on plaster board fixed to 2in x 2in celurized timber bradders.

Special Equipment

The appliance room is equipped with engine heater and charging panels set in the ceiling directly over the appliances, and tyre inflation equipment is provided at two convenient points in the appliance room.

The building was erected in seventeen months and the total cost inclusive of furnishings, was £33,000.

I.U.A. Third Assembly

THE official account has now been received of the proceedings of the Third Assembly of the International Union of Architects, which took place at Lisbon from September 21-27. Three meetings of the Assembly, the main policy-making body of the Union, were held and a number of important decisions affecting the composition and activities of the Union were taken.

Professor Jean Tchumi, Professor of the Lausanne School of Architecture and President of the Swiss Section of the I.U.A., was elected to succeed the outgoing President of the I.U.A., Professor Sir Patrick Abercrombie, who was not eligible for re-election. Sir Patrick, who has been President of the I.U.A. since its formation in 1948, was then elected Honorary President of the Union. Professor G. B. Ceas, President of the Italian Section of the I.U.A., and M. Nicolas Baranov, President of the Soviet Academy of Architecture, were elected as Vice-Presidents.

The United Kingdom, together with Mexico, the Netherlands, Poland and Portugal, was elected to the Executive Committee. The next meeting of the Committee is due to be held at Athens or Istanbul next Easter.

Fourth Assembly and Congress

Invitations to the I.U.A. to hold its Fourth Assembly and Congress, due in 1955, had been received from the United Kingdom, the Netherlands, Greece, and Turkey. The Assembly decided to accept the Dutch invitation to meet in Amsterdam.

I.U.A. Working Committees

In the interests of economy the following working committees of the I.U.A. have been abolished: Copyright, Building Documentation, Exhibitions, Industrialization of Building and International Competitions.

The remaining working committees deal with Architectural Education (U.K. representative: Mr. H. T. Cadbury-Brown), Housing (U.K. representative: Mr. Peter Shephard), Public Health (U.K. representative: Mr. Donald Goldfinch), The Position of the Architect in the Community (U.K. representative: the Hon. Godfrey Samuel), School Construction (U.K. representative: Mr. C. H. Aslin), and Town Planning (U.K. representative: Professor Gordon Stephenson).

The School Construction Committee has produced a preliminary report on its enquiry into school construction in different countries. Translations of the report are available on request at the R.I.B.A.

Evening Classes in Design

The Council of the Architectural Association wish to offer facilities for evening classes in Design to architectural students who have passed the R.I.B.A. Intermediate Examination, and who are not attending at any School of Architecture.

The classes are not intended as a preparation for the R.I.B.A. Finals, but are to provide opportunities for discussion and criticism of students' work.

The course will be staffed on an honorary basis. No charge will be made for tuition, but students will be required to pay a termly registration fee of ten shillings and sixpence.

All students who might be interested, are asked to write to the Principal's Administrative Assistant, 34/36, Bedford Square, London, W.C.1.

A.A. Students' Discussion

An Evening Forum, arranged by the Architectural Association School of Architecture's Students' Committee on the implications of the recent "Parallel of Life and Art" Exhibition from the I.C.A. The discussion will be led by Edwardo Palozzi and Peter Smithson, at 36, Bedford Square, W.C.1, on Wednesday, December 2, at 7 p.m. Refreshments will be available.

The Exhibition (by permission of the I.C.A.) will be on view in the School's lecture halls from Monday, November 30, until Thursday, December 3, and it can be visited during lunch-time or after 6 p.m.

Timber Notes

FREEDOM to use softwood without licence should bring neither shortage of supplies nor increase in price. By the end of this year there will be a stock of about 700,000 standards of softwood at the disposal of the trade, which is more than at any time since before the war. More important, this stock will have been accumulated under the first full year of private enterprise buying, with the importers purchasing to meet the known requirements of their customers, so there is a balance which has not been seen for a long time.

As to prices, there is still plenty of competition on the spot market, but this is likely to disappear quickly with freedom. The large stocks should act as a good buffer against any but the slightest price increases, but no early drop in softwood values should be expected. Forward contracts made with Sweden for delivery at first-open-water in 1954 have lately been at prices ranging from £75 to £78 a standard f.o.b. for 7in u/s redwood, which is a value some three pounds a standard higher than that paid for the timber now being sold. Reports of log auctions in Scandinavia give no indication of any hope for decreased prices in 1954.

Selling by Russia is expected to be much higher next year, up to 250,000 standards, while Canada may also place much more on the U.K. market. This additional supply might have a slightly weakening effect, but on the whole prices should be fairly steady in the immediate future. Softwood freedom is not likely to lead to any shortage next year, for demand will be restricted by price, and supplies known to be available are more than adequate.

An immediate effect of softwood freedom must be a slump in the value of those light hardwoods which have been widely used as softwood substitutes, for in almost every case they are more costly than softwood, and certainly not as easy to work, with supplies less assured commercially. The Malayan hardwoods particularly come into this category, while obeche and abura, for instance, must be more difficult to sell. Coupled with softwood freedom is the import freedom for hardwoods from all countries outside the dollar areas, which must mean a wider variety and keener price competition. An exception to the downward trend might be mahogany, for many experts say the present prices are as low as can be expected for this timber, reduced demand would merely lead to smaller production.

Changes may soon be made in the plywood regulations as they affect imports. Buying from the national stock continues, with a larger demand than anticipated for damaged stock, which carries a large import entitlement. Considerable care in buying this plywood has to be exercised by the lay buyer, for bonding has often been affected where floods caused the damage.

Increased imports of building boards are to be permitted in the first half of next year, and as work on imports can start in December it may be expected that supplies will be better than could have been forecast a month ago. Recently there has been a little weak selling by some sections of the trade, though opinion is generally held that prices should remain stable for next year.

Symposium on Mix Design and Quality Control of Concrete

A Symposium on Mix Design and Quality Control of Concrete is being organized by the Cement and Concrete Association in conjunction with the Reinforced Concrete Association, the Joint Research Committee of the British Cast Concrete Federation and the Cast Stone and Concrete Federation, and the Prestressed Concrete Development Group. The Building Research Station and the Road Research Laboratory of the Department of Scientific and Industrial Research have kindly agreed to co-operate.

The Symposium will take place at the Institution of Civil Engineers from May 11-13, 1954. The programme will be issued as early as possible.



VIEW FROM S.E. SHOWING DEVELOPMENT OF THE WHOLE SITE

UNIVERSITY OF MALAYA

ARCHITECTS: MESSRS. EASTON & ROBERTSON

*An Outline of the Scheme, which
is at Present at the Report Stage*

THE site of 1,400 acres is about 20 miles north of the centre of Singapore and some 3 miles north of Johore Bahru, the capital of the State of Johore. The latter has no facilities for the housing of students and staff. Consequently, complete residential accommodation is required ultimately for 3,500 students and 3,500 staff of all ranks with their families.

Site, which is very fine, is at present covered with rubber and other trees and scrub, and is intersected by ravines,

producing rather violent changes of level. There are good views over a fine sheet of water and the densely covered forest reserve. Only the smaller southern part of site has so far been provided with the essential anti-malarial draining. Hence development is to start there and will include the nucleus, i.e., large and small halls, administration, etc., the Library, the Faculties of Arts and Social Studies, of Science, of Medicine. An Institute of Marine Biology has a separate site on the shores of the Straits (see site plan).



VIEW FROM S.E. SHOWING LAYOUT OF THE SOUTHERN PART OF THE SITE WITH THE THREE FACULTIES, LIBRARY AND NUCLEUS.

drawing by Lawrence Wright

Staging of work envisages a sufficient amount of the student and staff quarters being placed on the southern site to keep pace with academic and social accommodation.

Faculties will be moved in this order: 1, Arts and Social Studies; 2, Science; 3, Medicine.

These requirements, together with the contours and the climatic conditions, posed the problem and provided the theme for architectural expression. Informality could not be avoided and was welcomed.

Living accommodation planned for students provides each with a bed-sitting room. Each residence houses 150 or more students. Each will have its own dining room with two separate kitchens—Malay and Chinese.

The total cost as stated by the Vice-Chancellor, Sir Sydney Caine, to a Press conference in Singapore is 145,000,000 Straits dollars, which includes the very extensive side requirements implied by establishing a large community in new land, e.g., roads, drainage and sewage disposal, services of all kinds, including a power station; pig, fruit and vegetable farms, and plant nurseries; shopping centre and bus station.

The scheme and report have been accepted by the University, but it now remains to be decided by the Malayan States and Singapore whether the necessary

finance can be provided to enable the scheme to be carried out.

It is estimated that 15 years will be required to complete.

Two partners of the firm spent October of 1952 in Malaya collecting information and studying the special conditions there, and the ultimate revised scheme was completed one year later.

* * *

EXTRACTS FROM THE ARCHITECTS' REPORT

TOPOGRAPHY

A MAJOR consideration in our layout has been the fullest possible reliance on natural contours, more especially the use of plateaux for the siting of groups of buildings and their connection by roads running, in the main, along the contour lines.

Major disturbance of the ground has been avoided on the score of cost, the desirability of preserving the natural drainage of the land, and the prevention of large-scale erosion.

Since, in general, low buildings are proposed, we should not be confronted with any difficult foundation problem. The subsoil and general nature of the ground lends itself to an economical type of foundation formed with stub piles and interconnected caps.



A : UNIVERSITY LIBRARY. B : ADMINISTRATION. C : UNIVERSITY NUCLEUS. D : MATHEMATICS. E : HISTORY AND ENGLISH. F : PHILOSOPHY AND HISTORY OF ART. G : GEOGRAPHY. H : SCHOOL OF ORIENTAL STUDIES. I : STAFF COMMON ROOM. J : ECONOMICS, EDUCATION AND SOCIAL STUDIES. K : FACULTY OF MEDICINE. L : VICE-CHANCELLOR'S RESIDENCE. M : FACULTY OF SCIENCE. N : ENGINEERING. O : SENIOR STAFF CLUB. P : BUS STATION.

The orientation of buildings so that their long axis runs east and west, plus a thermally well-insulated roof, provide the basis for the best internal conditions of ventilation and lighting possible in the Malayan climate. Hence we have planned most of the buildings in this way, and where inter-connecting blocks are required we have used these blocks for accommodation which might in any case require to be air-conditioned. Where such blocks exist, the type of construction would be modified so that the walls also would be well insulated against the rays of the east and west sun.

Account also has been taken of the need to ensure that the fabric of the building is such that it does not accumulate too much heat during the day only to re-emit it during the night and thus cause further discomfort.

SUMMARY OF CONCLUSIONS

The conclusions reached may be summarized as follows :—

(1) That the southern part of the site should first be developed and that on it should be placed the principal parts of the university in convenient relation to the main access road and to each other; also that sufficient residential accommodation and other facilities should be provided there so as to permit of proper functioning at several interim stages of development.

(2) That the nature of the site indicates an informal manner of planning.

(3) That considerations of cost, of the stage-by-stage con-

struction which is inevitable, and of climate considerations, all point to the advisability of low buildings.

(4) That the high installation and running cost of air-conditioning makes it advisable to restrict this to such buildings or parts of buildings as require it for technical reasons, and that attention to orientation, construction and natural ventilation should, in general, compensate for the lack of mechanical ventilation other than fans.

(5) That the principal of planning internal roads and communications in such a way that they follow natural contours and of placing the principal groups of buildings on plateaux should be followed as fully as possible.

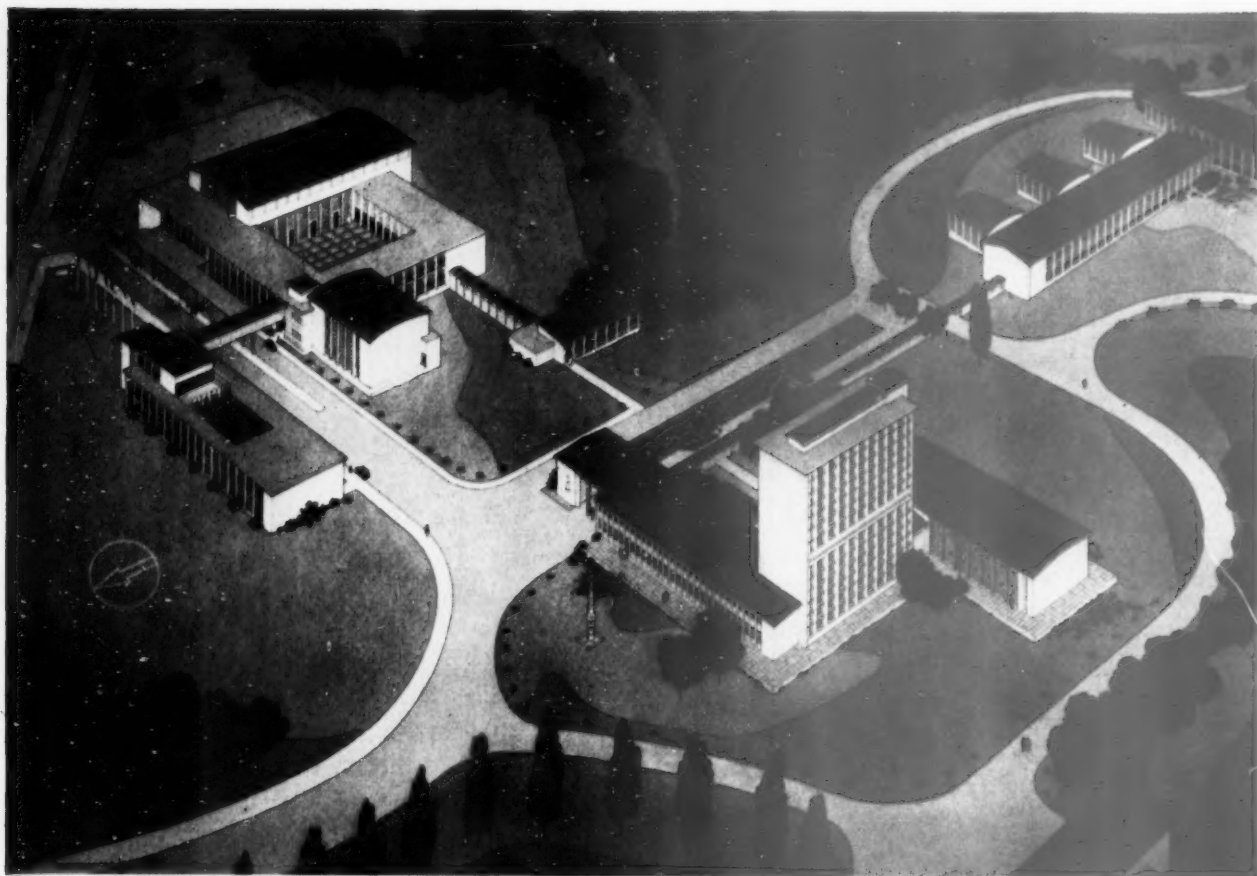
(6) That the landscaping of the site and the establishment of nurseries, vegetable gardens, and animal farms, should be regarded as inter-related requirements essential to the economy of the new university.

THE VARIOUS SECTIONS ARE:—

1. The Nucleus, consisting of:—

- (a) Administration buildings and other common facilities :
 - Vice-Chancellor's study and offices.
 - Registrar's department.
 - Bursar's department.
 - The court and council room.
 - Great hall (2,000 seats).
 - Small hall (400 seats).
 - Exhibition gallery.
 - Etc., etc.

[Continued overleaf]



CLOSE-UP OF THE LIBRARY NUCLEUS
AND PART OF THE FACULTY OF ARTS

drawing by Lawrence Wright

UNIVERSITY OF MALAYA

- (b) University library (stack room for 1,000,000 books).
- (c) University Press and book shop.

2. The Faculty of Arts and Social Studies, with Customary Department.
Totalling 98,850 sq. ft.

3. The Faculty of Science, consisting of:—

- (i) Department of Chemistry.
 - (ii) Department of Botany.
 - (iii) Department of Physics.
 - (iv) Department of Zoology.
 - (v) School of Engineering (provisional).
 - (vi) Department of Geology (provisional).
- Totalling 216,600 sq. ft.

4. The Faculty of Medicine.

The Faculty of Medicine provides all the departments required in a modern medical school. Totalling 364,000 sq. ft.

It is proposed:—

- (1) That bricks, cement and timber of local origin would be the basic materials.
- (2) That units of precast concrete construction should be devised which could be made on the site or locally in

large numbers and which could be erected by non-skilled labour on the site.

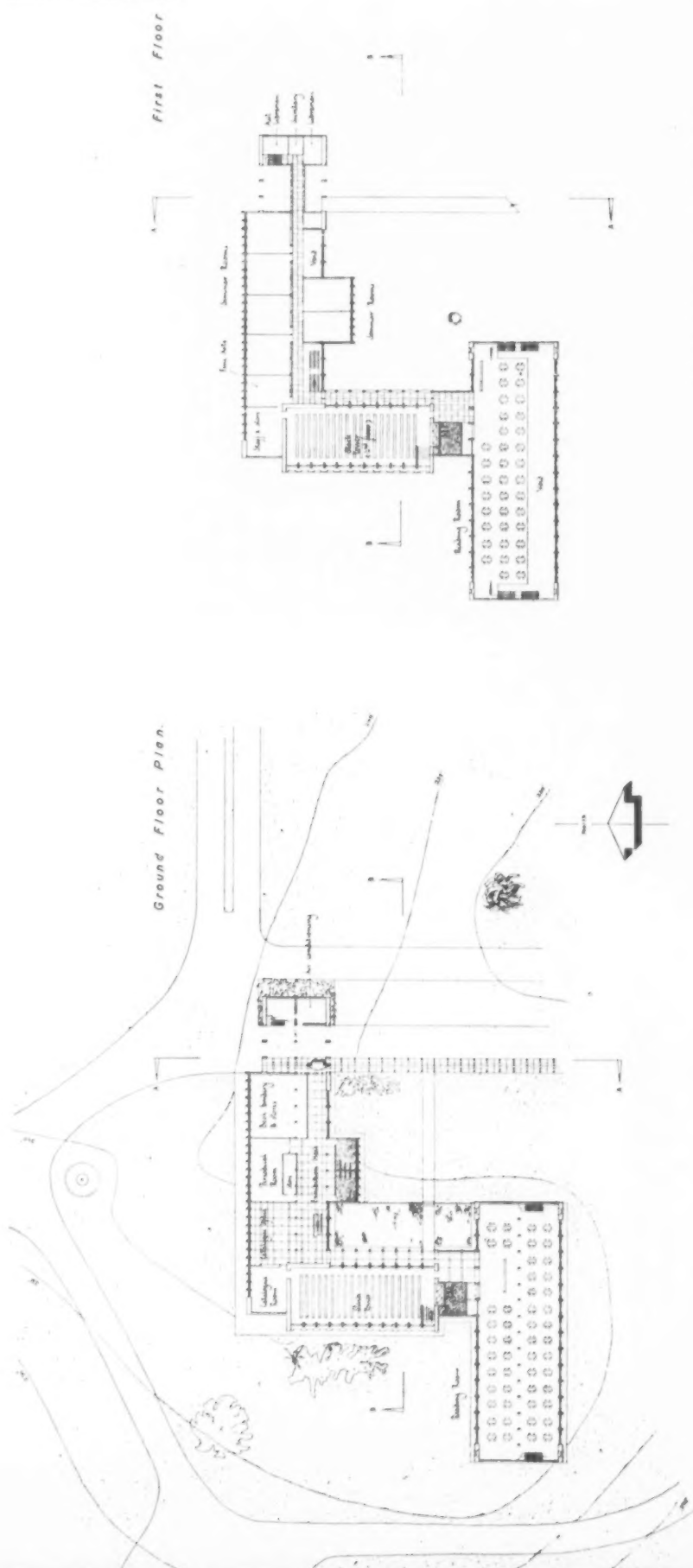
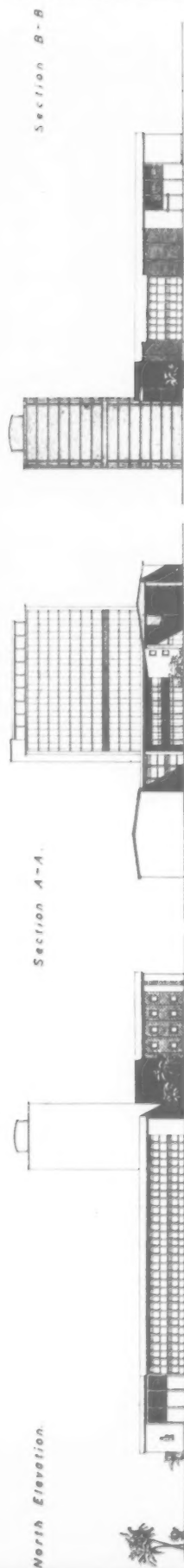
We have not yet had the opportunity of discussing this with the local contractors and supply organizations, but there seems no reason why such an arrangement which has been used elsewhere should not be found suitable. A type which we have employed on kindred structures is that of a precast skeleton frame with floors of precast slabs screeded over to form a monolithic structure.

Wall panels in the present case would be of brick or concrete block rendered and there would be extensive use of varying types of pre-fabricated panels with insulation where solid and with heat-resisting glass in the window sections.

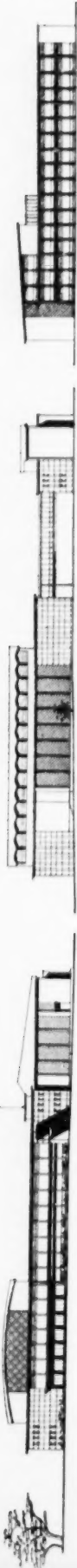
In the case of the east and west faces of the library stack room a system of metal panels with openings fitted with controllable louvres is suggested.

(3) Pitched roofs in general are assumed to be covered with Marseilles or Indian tiles but in certain sections, especially those of the nucleus and the library, we have in mind the use of copper sheeting as covering.

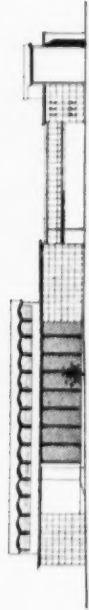
The Quantity Surveyors responsible for the preparation of preliminary estimates of cost are Messrs. Horace W. Langdon & Every, of London and Singapore.



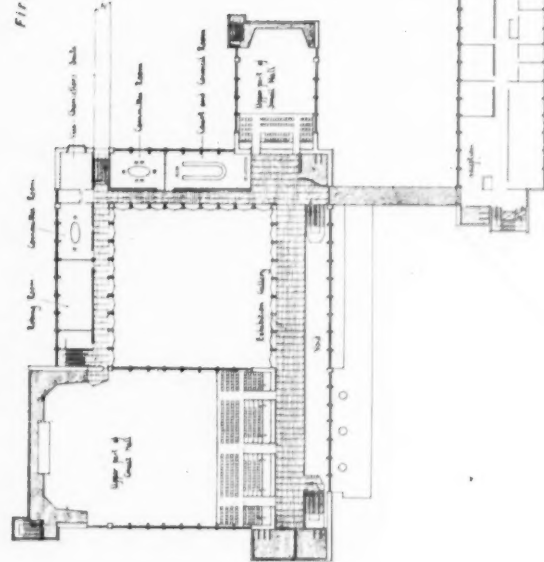
Elevations: North.



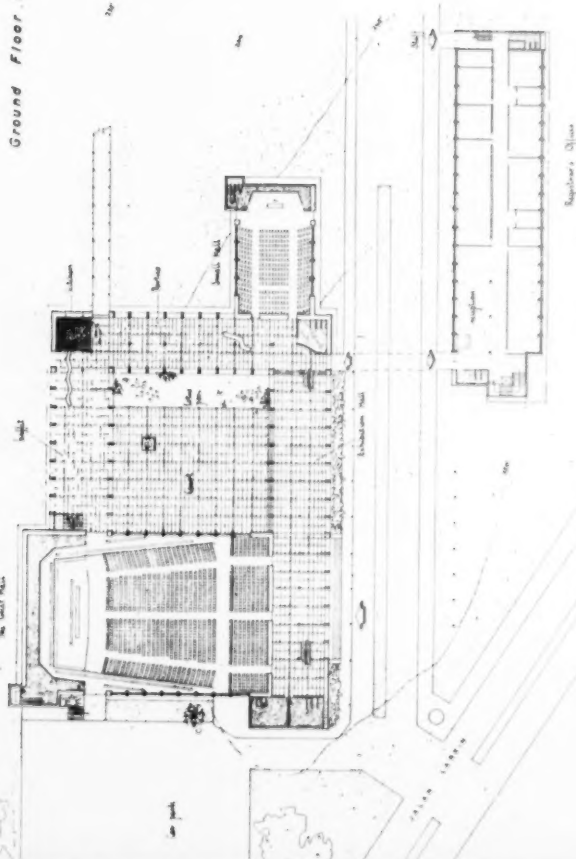
East.



First Floor Plan



Ground Floor Plan



Business Office



Registries Office

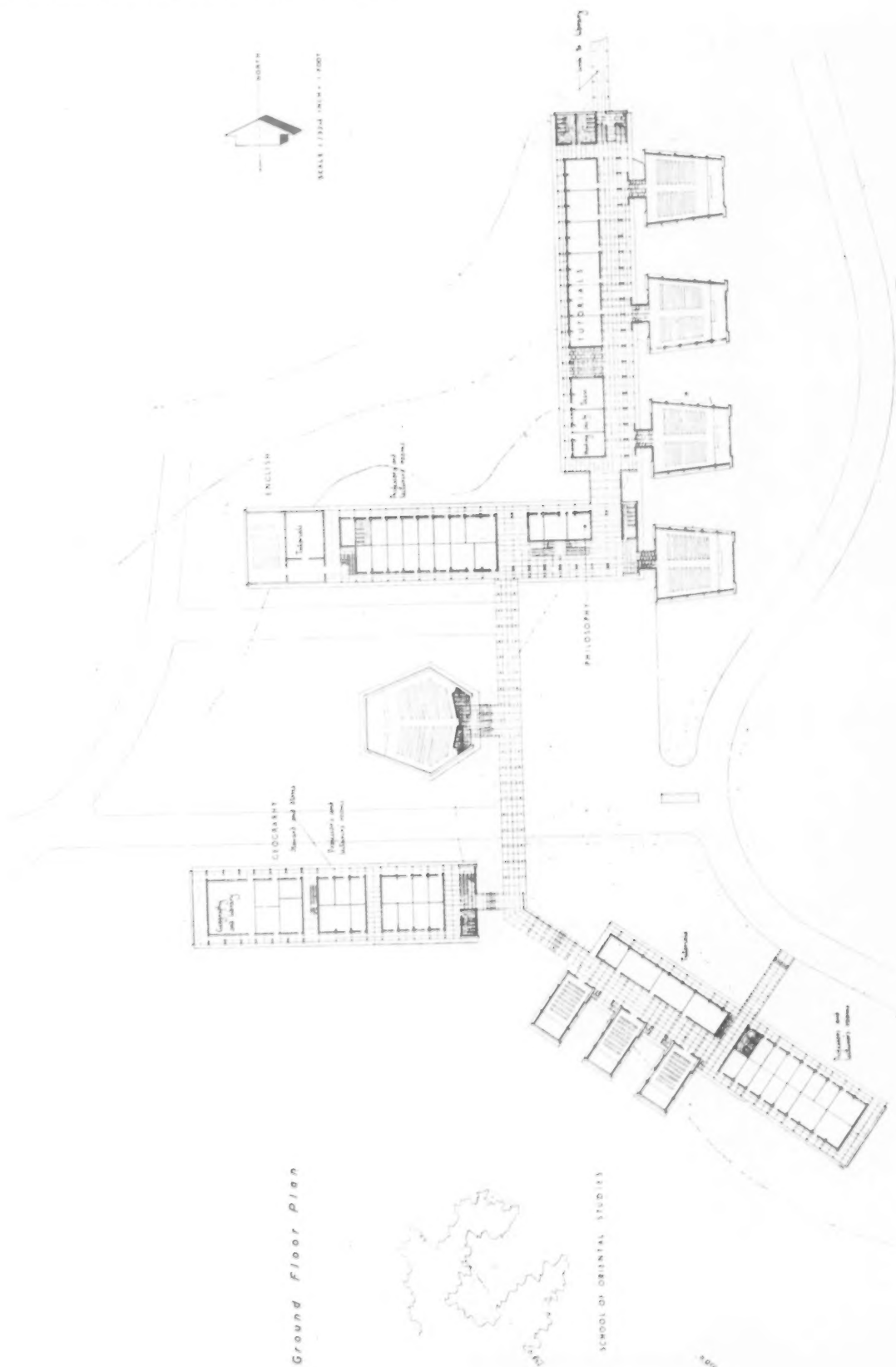


UNIVERSITY NUCLEUS

UNIVERSITY OF MALAYA

FACULTY OF ARTS

ARCHITECTS: EASTON & ROBERTSON



Ground Floor Plan

Mr. Macmillan opens the Building Exhibition

MR. HAROLD MACMILLAN, Minister of Housing and Local Government, opening the Building Exhibition at Olympia said: "It seems strange to look back to the position two years ago. We then embarked upon the great task of adding 50 per cent to the output of new houses. At that time it was quite a strain to find ways of doing it. Owing to the economic problems of the day and the difficulty of foreign exchange, we had to invent and improvise in all sorts of ways.

"That lesson has been useful to us. And don't let us put on one side, as out of date, all the lessons we learned then. We still need maximum skill and efficiency. The difficulties we have got over may come again.

"Meanwhile, it is good to know that just two years later timber is free again. It is free. But that does not mean that it should be wasted. For it is all a charge upon the foreign exchange. And so we must, in our turn, play fair.

"We had no hope of building that extra 100,000 houses without a steadily mounting production of building material. I want to pay my tribute to all the material producers, masters and men, who have helped me. The cement producers have added 13 per cent to their production, and next year they will, I am told, add still more. The brickmakers have increased output by a fifth, another fine record. The cast-iron pipe makers have got us over a shortage that might have crippled us. Through the whole range, from bricks to bath taps, you will find that production is going up.

"Encouraged by this sense of confidence, we are now going to tackle the second part—and indeed the bigger part of the housing problem—the old houses. And we are going to keep on building the new ones, at the same time.

"To do this I must call in, not merely the great contractors and the big builders, but the small men—the jobbing builders—accustomed to repair work of all kinds. This is just the job for them.

"The amount of work needed per old house will vary enormously. For the majority it will be just current repairs to houses in reasonably good condition. There may be four or five million such houses, and though it may be only a matter of £10 to £20 per house, all this adds up to quite a lot when you put it together. Then there will be the bigger jobs, where the houses are in a worse condition, and in some instances local authorities will have to help. And then there will be all the conversions and the improvements.

"What a chance all this is for the building industry to take another step forward! I told you two years ago that I would keep the order book full. Some say I have kept it too full—and here I am, filling it up again! But I believe that you will respond, as you have in the past. The more we try to do, the more we shall achieve.

"The moral of these years is that we can always do more than the statisticians believe possible. We have proved it, and we must prove it again.

"But, of course, if we are to do these difficult tasks, which mean hard work, extra hours and extra trouble, people must feel that they are doing something well worth while. Why was it in the war that we got such astounding figures of production? Because we had the country behind us, a united nation working with full enthusiasm.

"Well, I have a feeling that we are going to get something of the same kind behind the new housing crusade; for really the whole people are concerned in this, and they are determined that the slums must go and that the condition of the other old houses must be brought up to something like the standards of the new. It is this sense of a great national purpose which helps architects and surveyors,

builders, managers, draughtsmen, foremen and workmen, as well as the suppliers of the materials, to give of their best.

"I believe that this moral factor in production is as important as material incentives.

"At any rate, I am encouraged in this because my latest proposals have been received so generously by people of all parties. There may, of course, be differences as to whether we have chosen just the right methods in every case, but I have been struck by the great consensus of opinion that the job has got to be done, one way or another.

"But it is not enough that we should all feel that the job must be tackled. We must see to it that the conditions are right for concentration on this work. The Girdwood Committee recently said that house maintenance costs have trebled since 1939, and in earlier reports they have pointed to the high cost of new building.

"We are all concerned about the level of costs, and the building industry can do much to help us to meet the problem. Some of the answers may be here in this Exhibition, if those who could make use of them will do so with foresight and energy. There can be little doubt that there are wide divergencies in productivity within the industry. A Council house takes some 1,560 man hours to build in some parts of the country and three times as many in other parts. True, conditions vary from contract to contract, but not to this degree. What is the explanation? Ought we not to do something about it?

"Don't forget, the amount which owners of property, the local authorities and the nation at large can afford to do to give us better housing depends to a very great extent on the building industry, both managements and men, and on the building materials industry.

"Operation Rescue' is more than a policy. It is a challenge. The challenge is 'Can you do it, and do it at a reasonable cost?' I am sure that you can, and that you will."



John Thompson Beacon Windows Ltd. Stand designed by Bryan Taylor.



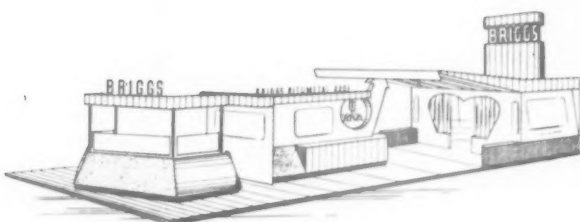
T.D.A. Stand, designer : J. R. N. Poole.



Lead Industries, designer : Cyril S. Denny.



Armstrong Cork Co. Ltd., designed by Beck and Pollitzer, Ltd.



William Briggs & Sons, Ltd.



S.M.D.'s Stand, designer : A. F. Hare & Partners.

BUILDING EXHIBITION STANDS

Prestressed Concrete at the Building Exhibition

by E. D. MILL'S, F.R.I.B.A.

THE Prestressed Concrete display in the Gallery of the National Hall has been organized by the Prestressed Concrete Group, under the auspices of the Cement and Concrete Association.

The object of the display is to show the scope of work of the Members of the Group and to illustrate the wide variety of prestressing jobs now being undertaken by Member firms. Although the majority of the work illustrated by photographs and models is still of a purely engineering nature, bridges, silos and similar structures, it is obvious that prestressing is being increasingly used in major building work for such structures as Liverpool University Medical School, designed by Weightman & Bullen, using Truscon prestressed beams, specially designed for the job.

Other interesting building structures include the new B.E.A. hangars at London Airport, which are illustrated by means of progress photographs and with a sectional model by the contractors, Holland & Hannan and Cubitts.

The most interesting of the new developments is a system of prestressed concrete lintols displayed by Udalls which consist of short lengths of plain concrete lintol prestressed together to form a beam. The units are 3ft long and available in seven standard sections with an effective span up to 22ft. It is claimed that the system, by using standardized lintol sections from stock, is quicker and cheaper than normal lintols and can be designed in special shapes, if required and special facings. The system can also be used for under-pinning and would appear to be a very useful contribution to the methods of using prestressing in normal building work.

The Dow-Mac Company exhibit their prestressed concrete railway sleepers which are now very widely used and which have become almost standard practice because of their long life and economy of first cost.

The wide variety of fittings and accessories for use in prestressing are shown on various sections of the display and these include items like the Ductube pneumatic rubber tubing which has been specially designed to make possible multiple or single ducts in concrete at the same time as the concrete is placed in position. The application of Ductube is simple, as it consists of a special tubing set in position inflated and then surrounded by concrete, after the setting of the concrete the tube is deflated and withdrawn. This has a particular application in relation to post-tensional concrete and Ductube can be used in all three major stressing systems.

Part of the display is devoted to the exhibition of the three major prestressing systems, namely, Freyssinet, Lee-McCall and Magnel-Blaton, these three systems are illustrated in some detail together with examples of typical jobs. Daily demonstrations are given showing the three systems in action in the actual prestressing of full-size beams.

Although prestressing is primarily an engineering technique it is already being used for small concrete work, although in some cases it is difficult to see what advantages are to be gained by this application in these fields.

The Charlton Concrete Co., Ltd., is producing prestressed concrete roof trusses, standardized to 20ft span for use in the agricultural field for simple roof coverings and the same firm produces a wide range of fencing units including a prestressed concrete Weatherboard slab for panel fencing, this unit is in 10ft lengths and it is claimed that it makes an economic and maintenance-free fencing unit.



Part of the Prestressed Concrete stand in the National Hall Gallery



National Flooring Co.'s Stand

The range of units and accessories displayed in this Prestressing Concrete Group exhibit is too wide for mention to be made of every individual item, but the general impression made by the exhibits suggests that the Prestressing Concrete Group is fully alive to the possibilities of its material in making considerable efforts to bring it into use in a wide field of building activity.



Metal Sections Ltd., designer : Rodney Thomas and Associates.



D. Anderson & Son, designers : Design Research Unit.



Sussex & Dorking United Brick , designer : Lanchester & Lodge.



Pilkington Bros., designer : S. M. S. Sternfeldt.

STANDS AT THE BUILDING EXHIBITION

Holoplast Ltd., designer : E. D. Jefferiss Matthews.



Stramit Boards Ltd., designer : June Park



Builders' Plant

*Recent developments
shown at Olympia*

BUILDERS' plant is almost the only section at the Building Exhibition (including woodworking machinery) where the different manufacturers are grouped together. It is true that there are still one or two exceptions to the rule, but the majority of the plant exhibits are to be found in the small annexe hall beyond the Grand Hall—where the Gardens are at the Ideal Home Exhibition. It must be remembered that the larger items of contractors' earthmoving plant, scrapers, bulldozers and such-like, are generally shown at the B.I.F. or the Public Works Exhibition, and there are also several crane manufacturers who are not exhibiting. There remains, however, a great deal of equipment on show, from hammers and screwdrivers to tower cranes and steel shuttering systems. While it may be true to say that certain sections of the building industries are still fairly resistant to the idea of mechanization, it can no longer be said that the equipment is not available, while a great deal of it is within the financial reach of quite small firms.

Beginning with hand tools, there is now a full range of saws, drills and planes, generally powered by electric motors, though some makers produce compressed-air types as well. For sites where no mains supply is available there is a number of firms making portable generators (petrol or Diesel) and many of these are designed to produce a comparatively low voltage, 230 V A/C being not altogether safe unless a good deal of care is taken to make sure that earthing systems are at all times reliable. A noticeable tendency among power tools is to produce multi-purpose devices, where a simple prime mover is produced with a number of different attachments to make it as versatile as possible.

Drills for instance; these may be produced in $\frac{1}{2}$ in or $\frac{3}{4}$ in size for drilling wood or metal. Extra equipment may include chisel mortising attachments, hole saws for use in making holes in wood or metal up to 3 or 4 in diameter, small circular saws, sanders or polishers, or hammer attachments so that the drill may be used for almost all purposes save that of planing. This means that with a basic expenditure of say £10 or £12 on a heavy-duty drill, plus a few pounds for subsidiary equipment, even the smaller builder can

(Continued on p. 665)



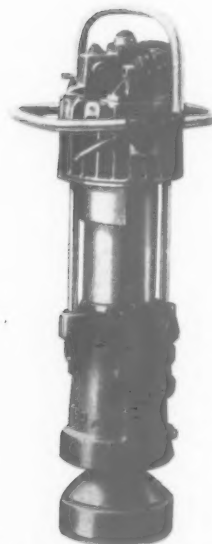
Warsop. H.D. Rock Drill.



Adam & Harvey. R5 Rapid Hammer.



Air Pumps. Trallair compressor.



Warsop. "Benjo" Rammer.

British Equipment. Bosch Breaker.

R.S. Brookman. Grinder.



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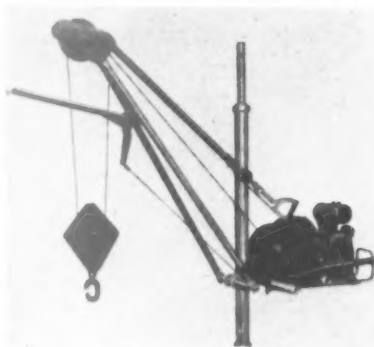
Builders' Plant

afford to double (at least) his carpenters' output for an investment of £30 to £40, about five or six weeks' wages. Similarly with cartridge-operated hammer guns. These will fix, in a few moments, studs or nails from $\frac{1}{4}$ to $\frac{1}{2}$ in diameter, and in any material and the fixing of a row of coat hooks, perhaps a full morning's work by hand, can be completed in ten minutes or twenty.

Moving on into the jobs where strength is perhaps more important than skill we come to straightforward digging and concrete breaking. For this purpose there are petrol or electric hammers which may be used with chisels for road breaking, with special tools for bush hammering or for cutting chases in brickwork, or with spade tools for use in hard clay. The petrol tools are completely self-contained, and may also be used for ramming, and the electric models can also be used for vibrating concrete.

Next we come to the question of mechanical hoists and lifting gear in general. In some districts there are still builders who maintain that it is better to pay 2d an hour "over the odds" to a labourer, who will then shift more bricks than the hoist. On some two-storey jobs this may sometimes be true, especially if only a few houses are being built on the site, but for anything over two stories the hoist has it every time. Various models are in current production, for taking loads between 5 and 30 cwt, and one type has power drive to its travelling wheels so that it can be easily moved round the site. These hoists have masts which can be extended with standard length sections of 10 or 15ft up to a total height of 80ft or more so that they can be used on flat and office blocks. Nearly all the hoist manufacturers have developed various types of brick clamping barrows and concrete skips and other ancillary equipment.

Mobile tower cranes, originally introduced from France and Germany, are now being produced in Britain and many builders in various parts of the country are making good use of them, both for housing work and on congested city sites. A certain amount of preliminary work is necessary in that a reasonably level rail track has to be laid down, but thereafter the crane does the whole of the lifting and placing work throughout the site. This involves a good deal of change in the usual site organization methods, the main one being that all materials are stacked in a central area, and can thus be fairly easily wired off to prevent the regular pilferage from which all contractors suffer nowadays. The central



A.C.E. Scaffold Jib Hoist.



Neal. Lorry Loader.



Wilson Bros. P.R.B. Planer.

Benford. Half-ton Dumper.



Warry. "Hercules" 15 cwt Hoist.



Thwaites. Diesel Dozer-dumper.

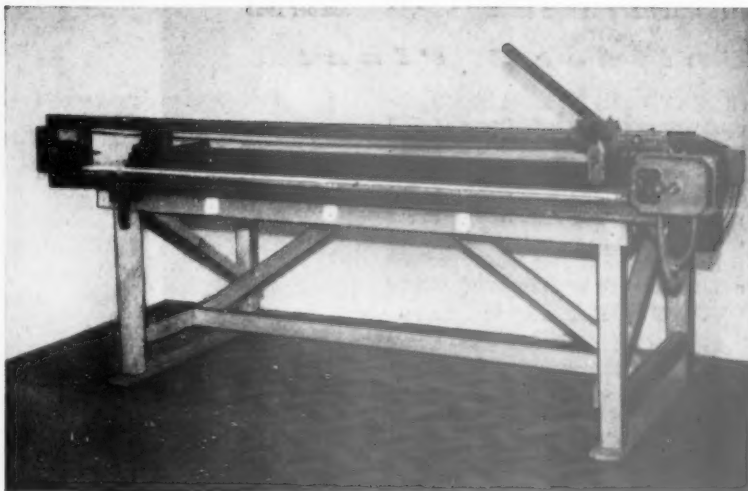


Builders' Plant

area is then used for all concrete mixing, for the casting of lintels for making roof trusses, or for building chimney stacks in lifts of 3 feet or so. All the placing is done by the crane, which will handle the large units. These can be assembled with far greater ease on the ground than on the building. The cranes can negotiate quite sharp radius curves and need not be considered as a limiting factor when the site layout is being planned. As with the hoists there are a number of items of ancillary equipment such as bottom dump skips for mortar or concrete and various clamping frames for lifting bricks.

In considering lifting gear it should be mentioned that there is a tendency to make hoists as a platform only, running on guide tubes built up in a frame of ordinary tubular scaffolding and operated from a separate winch, thus saving part of the cost of the hoist mast. Small jib hoists are also produced for clipping to tubular scaffolding in any convenient position: most of them have a maximum lifting capacity of about 5 cwt.

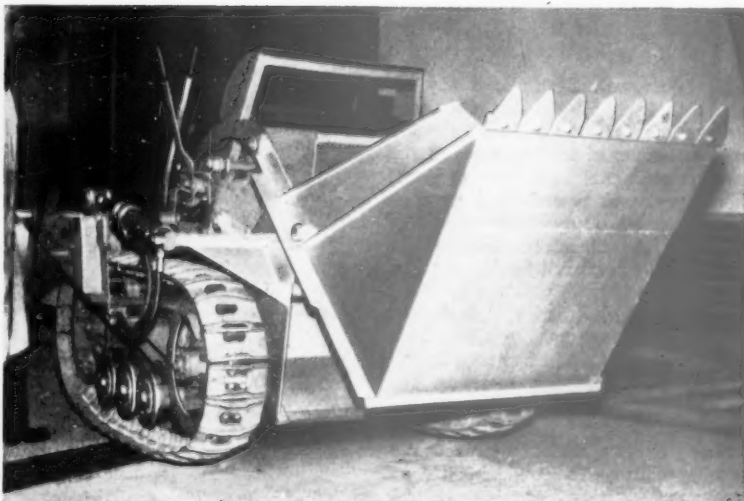
Small bulldozers, often combined with shovels or concrete skips, are now produced by a number of firms, and here again there is a tendency to produce a dual-purpose machine which can be used for a variety of jobs. Power barrows either pedestrian-controlled or on which the operator rides, may have either a concrete or earth-moving skip interchangeable with various types of platform for carrying other materials, and perhaps also arranged for towing trailers. In this section it is interesting to note that Ferguson Tractors are showing at this exhibition for the first time, and bearing in mind how much this firm has done in the mechanization of farming it is to be hoped that there may be comparable developments in the building trade. At present the basic tractor, petrol-paraffin or diesel, is available with angledozer equipment, a lifting bucket, a post borer attachment, and a variety of trailers for concrete carrying or for other materials. Bearing in mind the need for economy, it should also be mentioned that small-horsepower diesel engines are now readily available as prime movers and in sizes from 3 h.p. or so upwards; the saving in fuel cost is considerable.



H. G. Ruddick. Rudor motorized sheet cutter for asbestos cement sheet, plaster boards and similar materials.

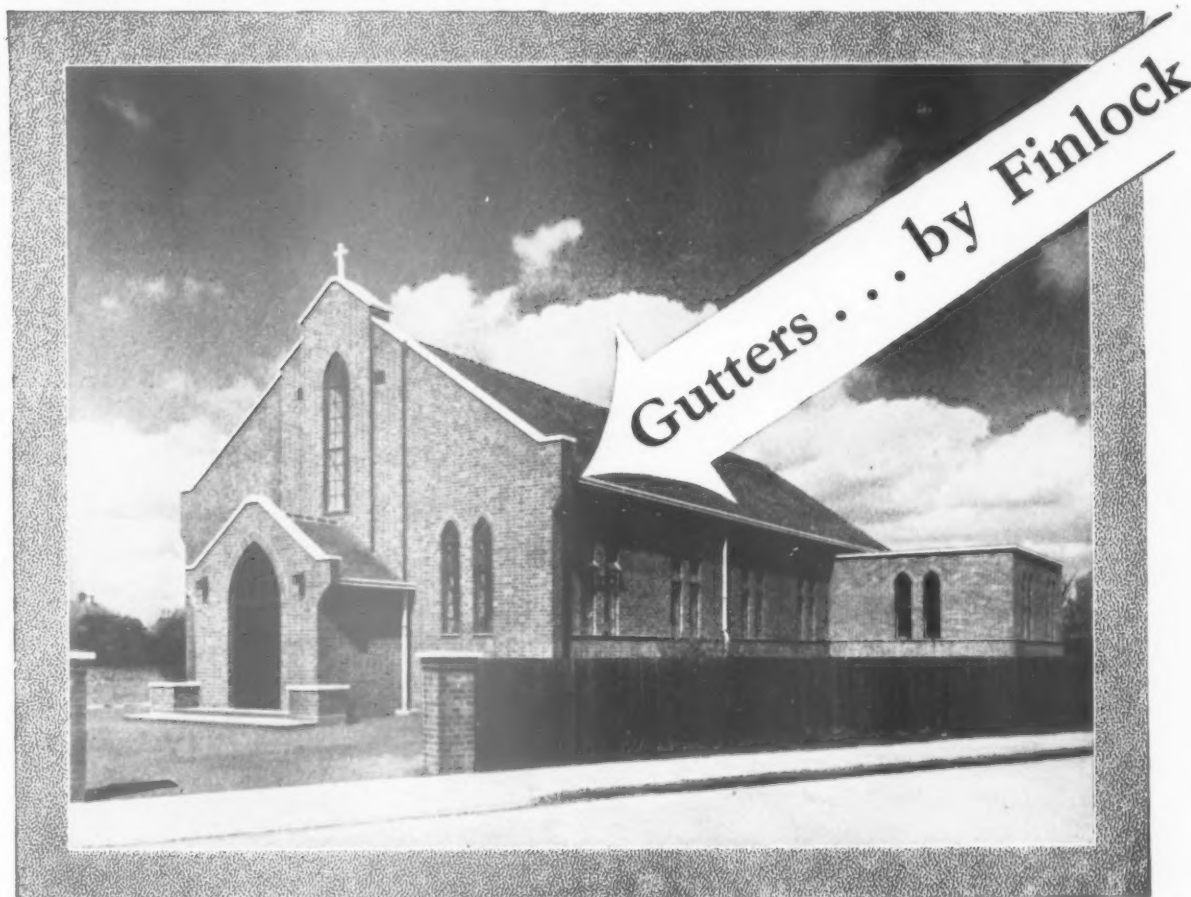


S. Gulterman. Three sizes of Square Hole shovel, 6in, 12in and 18in; will dig up to 12ft in depth.



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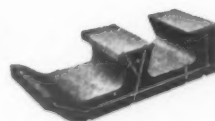
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SWISS MYTHS

*An Account of a Visit to
Switzerland this Summer
of the Canterbury College of
Art, School of Architecture*

SWITZERLAND is somewhat like England with more bumps and no slums. It is healthy, wealthy, wise and yet somehow without effective personality. Perhaps because there is nothing to hate and without a little hatred there is no great love. There is no litter, no ugliness, and the people including the children have a self-respect which rules out hooliganism. The women are pretty and gaily dressed, but true elegance is rare and even when found is apt to be of the Teutonic type. More and better quality can be seen by the bus load in Central London any day at five o'clock. The men of the towns are very proper and appear at all times immaculate and well armoured in male business attire. Save that is between twelve and two when with their typists they may be seen nearly as nature made them at the Strandbad. The brief-case in Switzerland is precisely what it calls itself: it contains the "briefs" into which Herr Gruber changes when he performs his chameleon act at noon. Still clutching it, he marches from the changing room to the sun terrace, although now presumably it holds the contents of his pockets. He does not, however, sacrifice it à la Doge to the Zee as did the lady we saw who gave her four-inch heels when she stepped with them into the water off the board walk. From all of which it may be judged that the party from Canterbury College of Art School of Architecture, marching like Hannibal, but sans elephants, across the Alps intent on world conquest, found time for other matters beside the pursuit of architecture.

The party visiting a school at Zurich.

Photo: Ian Liddell



Photo: D. Chamberlaine

New Offices, Zurich.

Nevertheless, having attended to the health of the body, it elevated its mind considerably towards the heights often photographed by the Brothers Westwood. In the company of charming and indefatigable members of City Architect Steiner's staff it toured Zurich by bus from dawn to dusk one day, visited the Cantonal Hospital another, inspected the works in progress at the University, explored the mysteries of Swiss architectural education (as profound as those the McMorran Committee seeks to plumb), delved into the Congress Hall, craned at office buildings, teetered through churches, swallowed hard at Einsiedeln, and took in somewhat glibly what Lucerne and Basle had to offer.

L. R. Barlow, in his role of Baedeker, led the way, staggered a little when it was discovered that no cook was available at the hostel so generously provided by the Zurich Education Authority, recovered smartly in a mixture of French and German, set up a bulk buying organization, trained all and sundry to use a frying pan, and returned triumphant with funds in hand and a victory over the French railway strike.

Swiss Housing is quite extraordinarily good. In effect it is bland and broad and avoids the tedious repetitiveness in pokey detail which often characterizes our own, this probably by eschewing pattern for its own sake. The widespread use of rendering also contributes to the effect by enlarging the general scale. Its weakness lies in its greatest strength—to wit, the layout. In freedom of siting, simplicity of access and beauty of planting it is beyond compare but: it is not urban and great new areas now being embraced by the City of Zurich are destined ultimately to make it a hybrid—neither town nor country although far superior to the suburbia we use for the same purpose. In this respect the Englishman would do better to study

Crawley New Town and it is interesting to consider how the one and the other will affect and shape the mentality of the next generation or two.

An impulse towards acceptance of the simplest technique in planning and construction as a basis for standard practice appears to dominate Swiss architectural thinking almost to the point of disaster. Block after block of handsome office building is fast replacing the picturesque senility of the Bahnhof quarter, but each as it gets closer to the realization of a standard linear grid becomes less and less significant and progressively more difficult to weather. One feels that unless the architect leaves himself more room to manoeuvre and to exercise his imagination the public may well be forgiven for thinking that the engineer could do as well and throw in calculations for good measure.

Professor Hesse, of the University School, admitted that even in this seemingly architectural paradise the architect is held in small esteem beside the engineer and the scientist. Perhaps the fault is that of the architects who, having shifted their responsibility for the design of structures on to the engineers, for urbanism on to the town-planners and for detail work on to industrial designers, are failing to give sufficient attention to the one remaining attribute for which the public is prepared to respect them, the art of architecture itself.

Fortunately, in one field architects still reign supreme and are highly successful. Churches everywhere, despite the utmost simplicity of form, are gems of siting, grouping, structure and detailing. Those who saw it voted for the Altstetten Church by Moser as still the finest, but for the less favoured the Pfister Brothers' Balgristkirche, not long completed, and the octagonal Markuskirche by Steiner were acclaimed as more than sufficient. The forms of both are simple and direct, with clean lines and an airy lightness which has nothing of religiosity about it. They seem contrived for people who have the kind of conviction about their faith which requires no dim religious light to bolster it and would make do with a barn if need be. In the churches detail and superb finish combine with form to create an effect of wholeness which is lacking elsewhere. Too often otherwise the temptation is to ignore the whole and to dote upon the parts so that Switzerland becomes the mecca of the detail hunter. This tendency is supported by the quality and aptness of factory-made components. Builders' hardware in particular makes our own seem positively medieval. It would be possible to work a minor revolution in English joinery given the type of butt hinge in universal use.

Perhaps of all building phenomena that which takes the traveller's eye most sharply is the quality, availability and prodigal use of magnificent softwood. Whether in the solid, or laminated into massive structural members, reduced to tiny slivers for shingling, or fabricated most lovingly into fittings, it is ubiquitous in all kinds of work. With it goes the utmost care in jointing and finishing to other materials. Intersections are made cleanly with metal to avoid weakening at joints and shoes to columns not only protect the material against rot, but give to it a lightness most surprising to those brought up in the old king-post tradition. Harder woods in combination with exquisitely wrought and surfaced metals are the key to much of the character which permeates shop-fitting and store detailing. The building industry appears to be more closely integrated with machine production and precision working than is common here. Surprisingly with this, however, and with the widespread use of tower cranes, goes a rusticity in scaffolding which is like a peep back into the old put-log and barrel days. One of the only places where metal scaffolding was seen in use was the Monastery at Einsiedeln, stylistically of the 17th-century and surrounded on all sides by forestry.

The Swiss are fond of "art." They spend freely on sculpture and painting for their buildings: 1 per cent of the cost

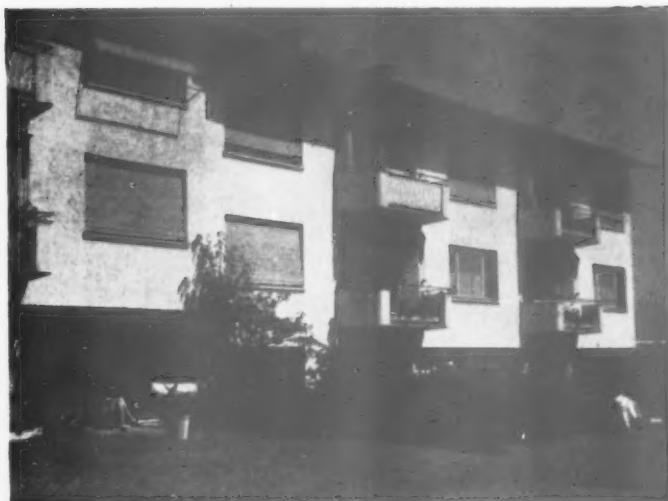


Photo: Ian Liddell

Flats at Zurich.



Photo: E. Cooper

Flats at Zurich.

is set aside in public works and private owners seem more liberal, but the standard of painting is very low. It has the anamic fresco tendency which one vaguely associates with the well-meaning efforts of Pre-Raphaelite revivalists in this country. In sculpture the best work is that associated with schools where a deliberate *naïveté* produces a better sculptural effect than the more sophisticated gymnastics of the figures which lean out of office façades or stand on their heads in the gardens before them. There is irony in this, because with their usual care to be on the side of the gods the Swiss go out of their way to look after artists and provide in the housing co-operatives dwellings with studios and workshops specially for them. Odd that they do no better than we who let them starve in Gunter Grove.

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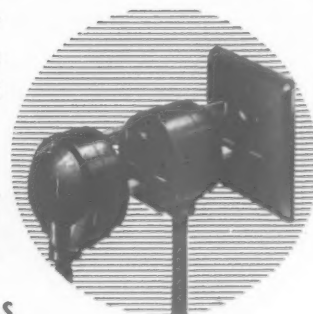
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Front view of one of the bungalows which have been built at Chandigarh for Ministers.

Chandigarh—The New Capital of the Punjab

Reprinted by Courtesy of "Indian External Affairs"

ABOUT 150 miles northwards of Delhi at the foot of the Shiwalik Hills with the snow-clad peaks of the Himalayas towering in the background, a new city is being built. Here, within a few years, half a million people in Punjab will see the realization of their dream for the new State Capital at Chandigarh.

The need for a new Capital for the truncated State of Punjab arose as a result of the partition of the country which left Lahore the traditional Capital in Pakistan. The Government temporarily shifted its headquarters to Simla—the Himalayan holiday resort and at one time Summer Seat of the Government of India. Simla, however, is not a very suitable site for an all-the-year-round administrative centre on account of its extreme climate in winter and remoteness from the plains.

The site chosen for the Capital has numerous natural advantages. Apart from being centrally situated, it possesses moderate climate, abundance of building material, natural drainage facilities and a soil firm for building and fertile for planting. Bounded on two sides by rivulets which it is intended to convert into vast green carpets of trees and grass, the Chandigarh plateau provides a splendid natural setting. It affords ample scope for Monsieur Le Corbusier to experiment with his philosophy of architecture—philosophy which insists on "sun, space and silence" for every citizen.

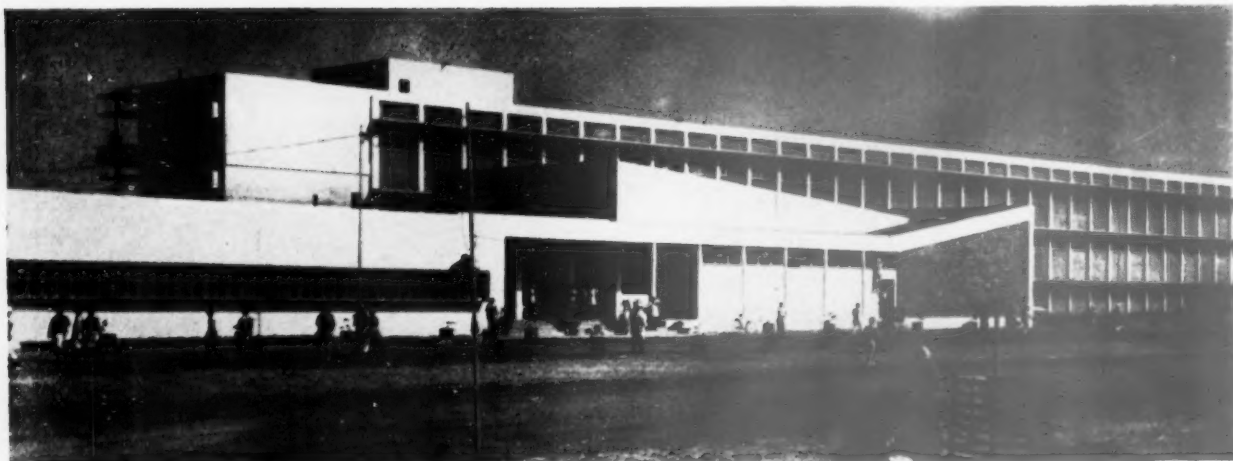
Intended to take in a population of half a million people, the original Master Plan was worked out by an American Town Planner, Mr. Albert Mayer and his colleagues of the firm of Mayer and Whitelelsey, of New York. It was further discussed and modified by a team of world-renowned architects, which includes besides M. Le Corbusier, his associate, M. Pierre Jeanneret, Mr. Maxwell Fry, and his partner, Miss Jane Drew. Ably assisted by a number of Indian town planners and engineers, this team of brilliant architects has finalized the plan and construction on the site has started on a large scale. The town will have a population of 150,000 by the end of its first phase of development in 1956.

With such a galaxy of architects at work, Chandigarh bids fair to set a new standard of architecture. Asked as to the style of architecture the new city will have, Monsieur Jeanneret replied unhesitatingly, "the Chandigarh style." It will be neither the Rajput nor the

Moghul, nor the Western nor Renaissance, but something entirely different and new, suited to natural environments and the needs of the people. Chandigarh would be a city in the words of Mr. Nehru, Prime Minister of India, "symbolic of the freedom of India unfettered by the traditions of the past."

The city area has been divided into a number of units or sectors, each measuring three-quarters by half a mile. Enclosed by a network of roads, these sectors would be quasi-independent housing units, each providing accommodation for 5,000 people in the low density area to 20,000 persons in the most populous parts. Though easily accessible from the major road system of the city, the individual sectors will be fully protected from the dangers and annoying features of major traffic. Each sector is practically self-sufficient in its daily requirements and provides essential amenities of community life, such as nursery, junior, secondary schools, with their playgrounds, shopping centre of its own, health centre and enough open spaces to serve the recreational needs of the residents.

Each sector has been further subdivided into a number of communities



The new Engineering College at Chandigarh. At present it is being used for the Legislative Sessions of the Punjab State Assembly.



Two-storey self-contained flats with separate compounds now under construction for the new High Court Judges.

CHANDIGARH—NEW CAPITAL OF THE PUNJAB

containing about 150 houses with seven to eight hundred people—the size of an average Punjab village. It has been estimated that these community centres are cheaper to build and would keep intact that corporate life and healthy surroundings with open spaces and towering trees which for ages has been a marked feature of Punjab village life. In planning these sectors the architects have maintained a fairly big open space, running practically in the centre of the sector north to south and continuing from sector to sector, thus according a safe and quiet way of moving about from one part of the city to another and even outside the city by bicycle or on foot. Thus these neighbourhood units while retaining their separate individuality will form an integral part of the city life.

The sectors are planned to encourage a sense of being self-contained entities catering for all the daily wants of home. Crossing each sector in the centre, though in opposite direction to the green belt, would be the main street or bazaar, the shopping centre of the locality. Somewhere near the centre of this street will be the main square—the hub of the life of the sector with its cinema, the bus stand and the post office. Though primarily a street for local needs, one would be able to cross the city moving along it.

Such shopping streets lead from each of the sectors to the main shopping centre of the city.

Road System

Another feature of Chandigarh will be its road system, which would in an admirable way solve the traffic problem of the city. Motor traffic would be confined in the main to the regular network of roads from which pedestrians and slow-moving traffic would be excluded. On other roads the motor car has been excluded or heavily controlled and the pedestrian is made the master. In fact the plan has been so worked out as to provide free pedestrian movement with ready access to public transport.

The distinct architectural style of Chandigarh will be exhibited most dramatically in M. Le Corbusier's designs for the Capital group of buildings of which the first to be built is the High Court. There are four principal buildings in this group—the Assembly Chamber, the eight-storeyed Secretariat, the High Court and the Governor's residence. These buildings will stand on a wide and level expanse of garden, in a subtle, unsymmetrical relationship with each other on the high ground between the city and the mountains. The existence of these majestic buildings will give a general

sense of importance and unity to the citizens of Chandigarh.

Transport

Chandigarh will have excellent transport and communication facilities. The site will be connected by road with the existing highways from towns within the State and it is also proposed to provide, in certain cases, new highways which will serve to make it easily accessible to the neighbouring States and also to link it up with certain important zones. After the development of these communications, there will be almost seven arterial roads converging on the Capital which will effectively disperse the traffic to all parts of the State and also to the neighbouring States of Kashmir and Uttar Pradesh. A small railway link will connect the site with the Ambala-Kalka section of the Northern Railway. It is also proposed to build a civil airport at a convenient distance from the Capital.

Industrial Area

The industrial area spreading over about 580 acres has been set apart at one end of the town. With good housing, cheap electricity, educational facilities, variety of experience and better climate, conditions for industrial development will be more favourable

here than elsewhere in the Punjab. There can be little doubt that with the growth of the town, the development of Himachal Pradesh and the availability of cheap power from the Bhakra Nangal Project within a couple of years, a large number of industries will spring up at Chandigarh.

Cultural Life

The town, when developed, will become the nucleus of the rich cultural life of the State. Government has not only provided for educational institutions to be built by the State, but also for educational and other cultural institutions to be run by private enterprise. In addition, an area of more than 300 acres has been reserved for the Punjab University at one end of the town. A site for an All India Radio Station has also been reserved.

The economics of Chandigarh are based upon the capacity of the people to pay for what they so much need. Apart from strictly governmental buildings there is little subvention from either the State or Central Government and the price of land must pay for the generous social and public services which are included in the project. The city will be provided with a water supply; water-borne sewerage for every dwelling, a fully articulated road system; rail and road connections. These are fundamentals. But no less fundamental to the project are the schools and colleges of different types, health and community centres, markets, general, maternity and dental hospitals, all of which will be built to serve the city as it grows and not after it has grown. Thus in the first sector to be developed the building of schools, health centre, shops and market place will accompany the construction of houses. And when shortly the general public take up their allotted plots for building, these essential services will already be in existence.

Housing

The over-riding problem, however, is cheap housing, and it is felt at its worst in the lowest categories of houses. To provide two small rooms, a kitchen, store, wash room and w.c. on a plot of land measuring 16ft 6in by 78ft 9in for Rs.3,250, which is equivalent to £240 sterling, has been achieved only by long and detailed study by architects and engineers alike; but the value of a self-contained small house, grouped closely in an urban village form, with ready access to schools, open space and markets outweighs the long pains of preparation.

As the grade of house rises the problem decreases in severity though the budget provision is stringent. Houses with more accommodation and better amenities are being built for higher categories of Government employees including judges and ministers.

With construction work in full swing, the infant city, with population of 10,000 people, is already humming with activity.



Flats for Civil Servants of the superintendent class.



The Secretariat Building at Chandigarh, the newly inaugurated Capital of the Punjab.

Buildings under construction.



Housing

I HAVE lately had an opportunity to visit a number of recently completed housing schemes where I was able to obtain, without the attendance of the architects or local housing officials, some tenants' views on these new dwellings. I had a feeling that many tenants were so pleased to have a house at all, and more particularly one with the right amount of rooms to accommodate the family properly, that they tended to overlook or put up with obvious inconveniences of planning. My main purpose in making these visits was an endeavour to assess whether the recommendations of the second and third supplements of the Housing Manual, which made many reductions in plan spaces and equipment, were in fact proving to be satisfactory for living. Obviously reduced building costs to meet rising prices of labour and materials enabled rents to be maintained, whereas if the full Manual recommendations had continued rents would have to have been increased. Many tenants grumbled about the amount of rent but when one pointed out how much the State and local rates contributed they began to realize what they would have to pay to own a house of their own.

I took particular care to watch the points of reduction made in Appendix B of "Houses 1953" which are stated to be based on "acceptability to local authorities and their tenants." The main impression I retain is that undoubtedly these economies are welcomed by the authorities as they keep down costs but that the tenants have no option and therefore have to accept what is given them whether they like it or not—in many cases they obviously did not like these economies.

Taking the points in the order they appear in Appendix B, I propose to put some tenants' observations. Many tenants expressed the view that the rooms seemed very low, but few, I believe, appreciated that the height was in fact a change from what had been customary for so long. Many tenants complained, especially those over middle age, that the staircases were steep; this does not seem surprising as the Ministry suggests that 7½ in risers are acceptable. This surely does not comply with B.S.585 for staircases which I know many have criticized as being too steep at the permitted limits. Surely we could afford space for 14 risers instead of 13, which would still give risers of just over 7 in. Many tenants complained about the extensive use of winders which made these steep staircases even more awkward. Incidentally, Fig. 3 in "Houses 1953" has no fewer than six shaped treads.

The suggestion that bathrooms can be reduced to 4ft 6in between structural walls again seems too much like cheese-paring as the old 4ft 9in, less wall finishes, has proved narrow

enough when a woman is bathing a child. The reason given in Appendix B, namely, "this allows the adoption of a 3ft preferred dimension," seems to indicate that the preferred dimension is too small.

W.C.s placed in bathrooms seemed to be very unpopular with tenants generally, even in very small households. I heard no complaints suggesting that only one W.C. in houses up to three bedrooms was inadequate, although many tenants said they would have preferred the W.C. on the ground floor to save constant tramping up and down stairs, often in dirty boots.

Storage and cupboards provided a very large number of observations. The amount of storage for articles other than food and clothes was almost invariably stated to be quite inadequate, thus the Appendix B suggestion that the 50 sq ft storage in urban areas may contain the fuel store is likely to be very badly received. The Manual recommended an area of 12 sq ft for fuel storage in dwellings with one ground-floor solid-fuel fire and 20 sq ft for those with two fires, which are certainly very minimum in themselves and are large deductions from a total storage area of 50 sq ft. Another constant complaint was that the storage space was damp because it was outside and unheated so that articles such as suitcases or spare beds became unusable.

The lack of cupboards was a constant complaint as nearly every housewife said she never knew where to keep clothes, household linen, spare china, etc. The extent of cupboard fittings in kitchens was far too small so that most kitchens were cluttered up with odd and unsatisfactory pieces of make-shift furniture. Linen cupboards were invariably too small in the larger households as the tanks or cylinders, and often the cold water storage cistern as well, occupied such a large part of the space. Views on bedroom cupboards varied—the older and better-off tenants often preferred no cupboards so as to have space for bedroom suites while the younger tenants and those who were less well off preferred cupboards as they could not afford to buy wardrobes, or they considered it was easier to clean where there were cupboards and no wardrobes. Certainly Figs. 1 to 8 in Houses 1953 are very mean in their cupboard provisions and even when they are provided many of them are badly placed and of very poor shapes and sizes. Several tenants remarked that those who designed their houses should be made to live in them for at least a year; I think this idea might help enormously the planning of our dwellings, especially if the temporary tenants included those responsible, both technical and administrative, for Houses 1953. One tenant suggested that it would be a good idea to provide an

official residence for the Housing Minister planned on the minimum dimensions and with the minimum equipment recommended by the Manual as he was sure there would then be a better appreciation of the problems of the householders.

There were many complaints that the placing of fireplaces caused terrible draughts. I felt that many plans did not, in fact, take account of this problem and, in addition, heating facilities seemed to be inadequate for some spaces such as dining areas. In a scheme in the North there were bitter complaints about the inadequate size of the heating appliances and their complete absence on the upper floors as the tenants had always been accustomed to large and plentiful solid fuel fires and found electricity too expensive as a replacement.

There were many complaints that rooms were inadequate in area and living rooms insufficient in number. In several instances I was told that it was impossible to be quite away from the children or for the teenagers to find a suitable place for homework because there was in fact only one living room since the dining space was merely an annex of this area. It seemed that most households of more than two persons would have preferred two rooms in which sitting was possible. Many said also that the living room was not large enough to see the TV properly. Personally I found that many houses seemed to have far too much furniture in them but enquiries about its possible reduction always seemed to bring a reply that it was less than the tenants would like to have if they had more space. It certainly is not easy to put a dining table, 6 chairs, a sideboard, a TV set, a radiogram, an upright piano, a three-piece upholstered suite, several odd chairs and tables, a china cabinet, a bookcase, three adults and two youths, one visitor (myself), a large dog and a cat in one dining/living room having a floor area of 250 sq ft, but I now know it can be done. Equally, it is very difficult to cook, wash, store food, china, glass, cutlery, cleaning gear, cooking utensils, etc., etc., for the same family, in an area of 70 sq ft but again it can be done but not without making family life rather strained at moments.

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Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

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EAST BARNET U.C. (a) 20 elderly people's flats at Churchmead Close. (b) Engineer and Surveyor, Town Hall, Station Road, New Barnet, Herts. (c) 2gns. (e) Dec. 12.

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HYDE B.C. (a) Reconstruction of public baths at Union Street. (b) Borough Engineer, Greenfield Street. (e) Dec. 5.

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MANCHESTER C.C. (a) Internal decorations to various police premises. (b) City Architect, Town Hall. (c) 1gn. (e) Dec. 10.

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GATESHEAD B.C. (1) 196 multi-storey flats. (2) Barn Close site. (3) Geo. Wimpey and Co., Ltd., Orchard House, Newcastle-upon-Tyne. (4) £482,408. Borough Engineer: G. F. Winters.

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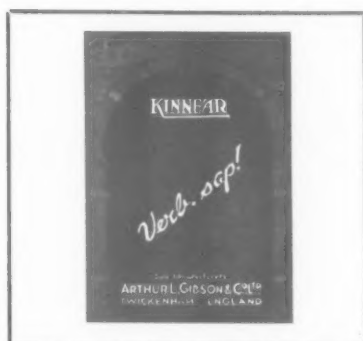
DENBIGHSHIRE, MINISTRY OF WORKS. (1) Alterations and additions. (2) Post Office Engineers' Workshop, Hill Street, Wrexham. (3) Lloyd, Evans and Son, Ltd., 23, Smithfield Road, Wrexham.

HERTFORDSHIRE, MINISTRY OF WORKS. (1) Internal painting. (2) Garston B.R.S., Watford. (3) W. T. Pickering and Son, Ltd., 19, Watford Heath, Watford, Herts.

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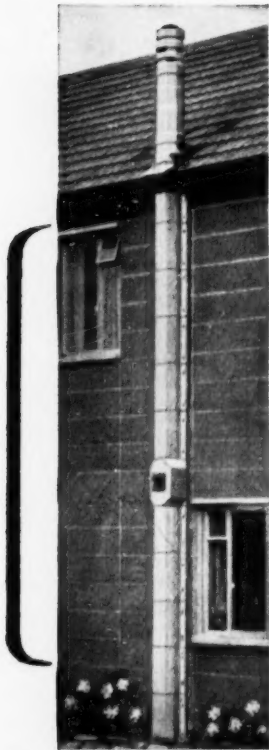
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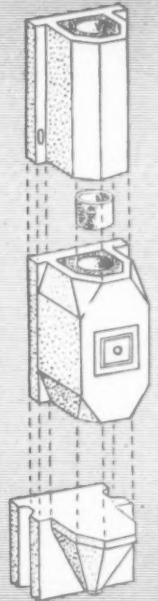
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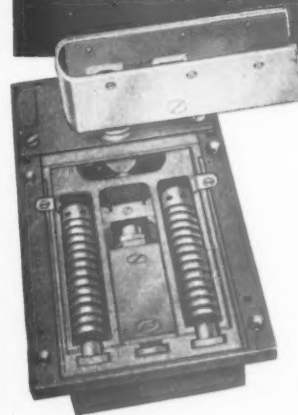
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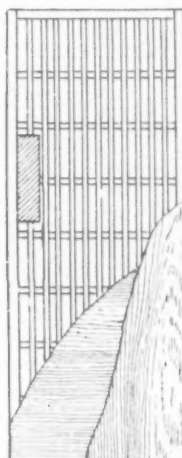
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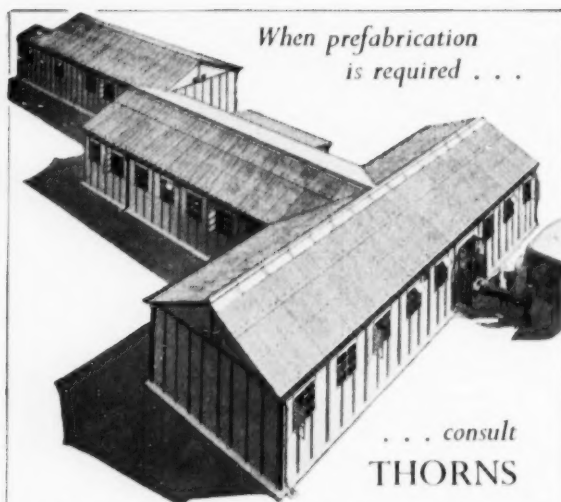


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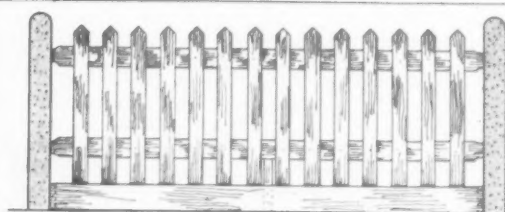
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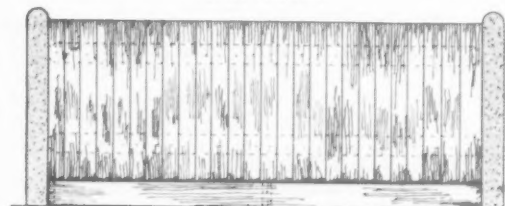
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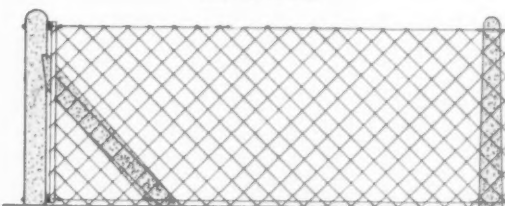
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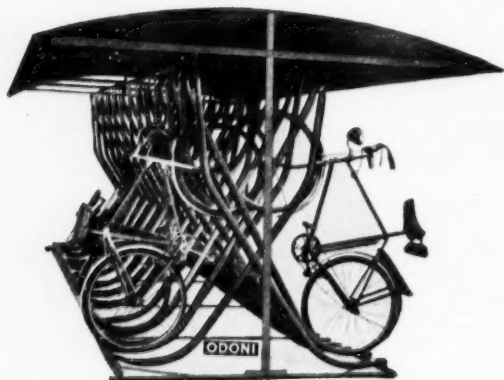
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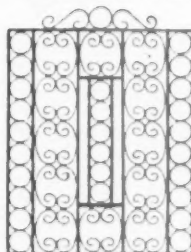
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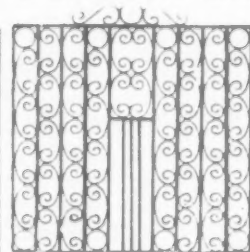


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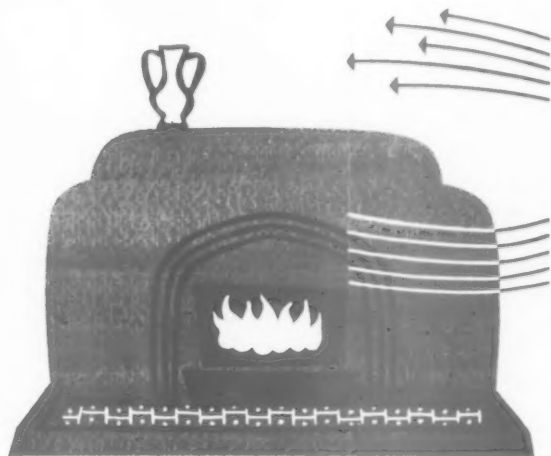
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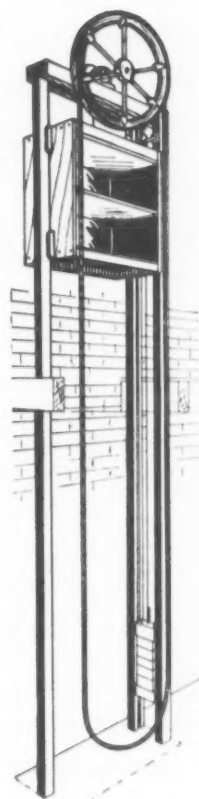


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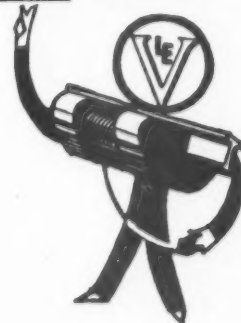
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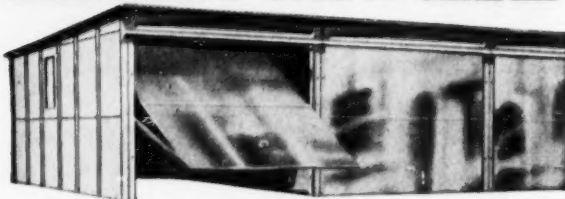
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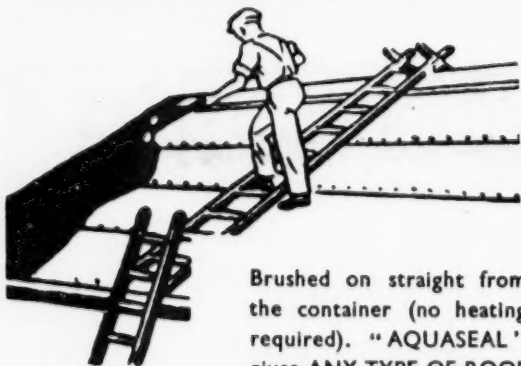
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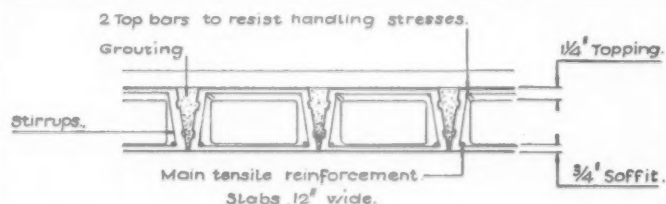
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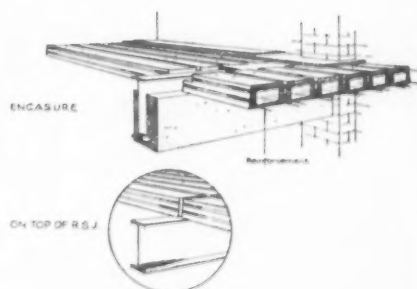
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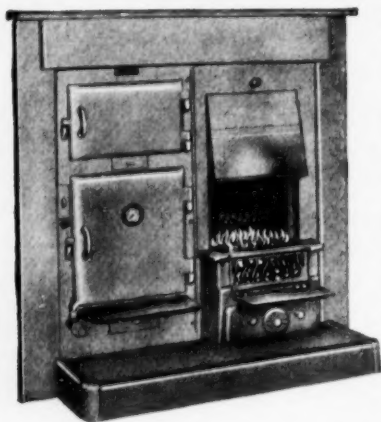
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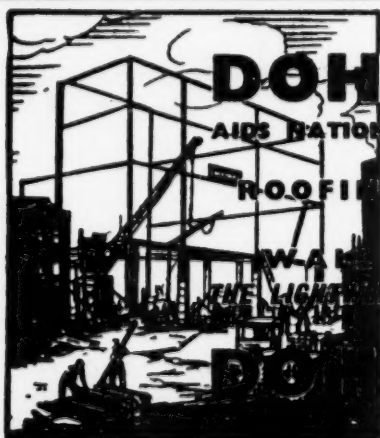
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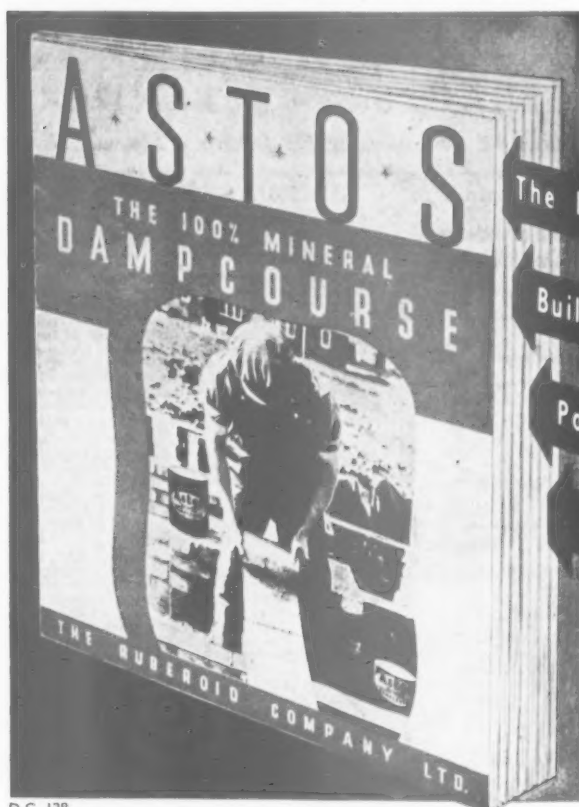
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[7463]

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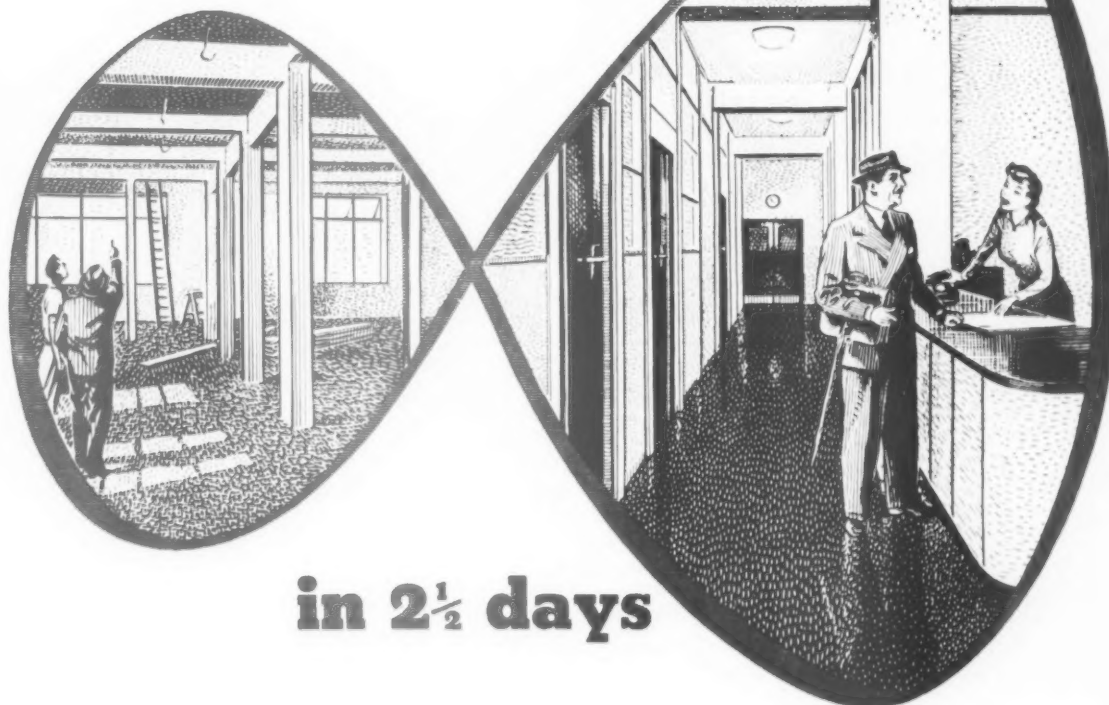
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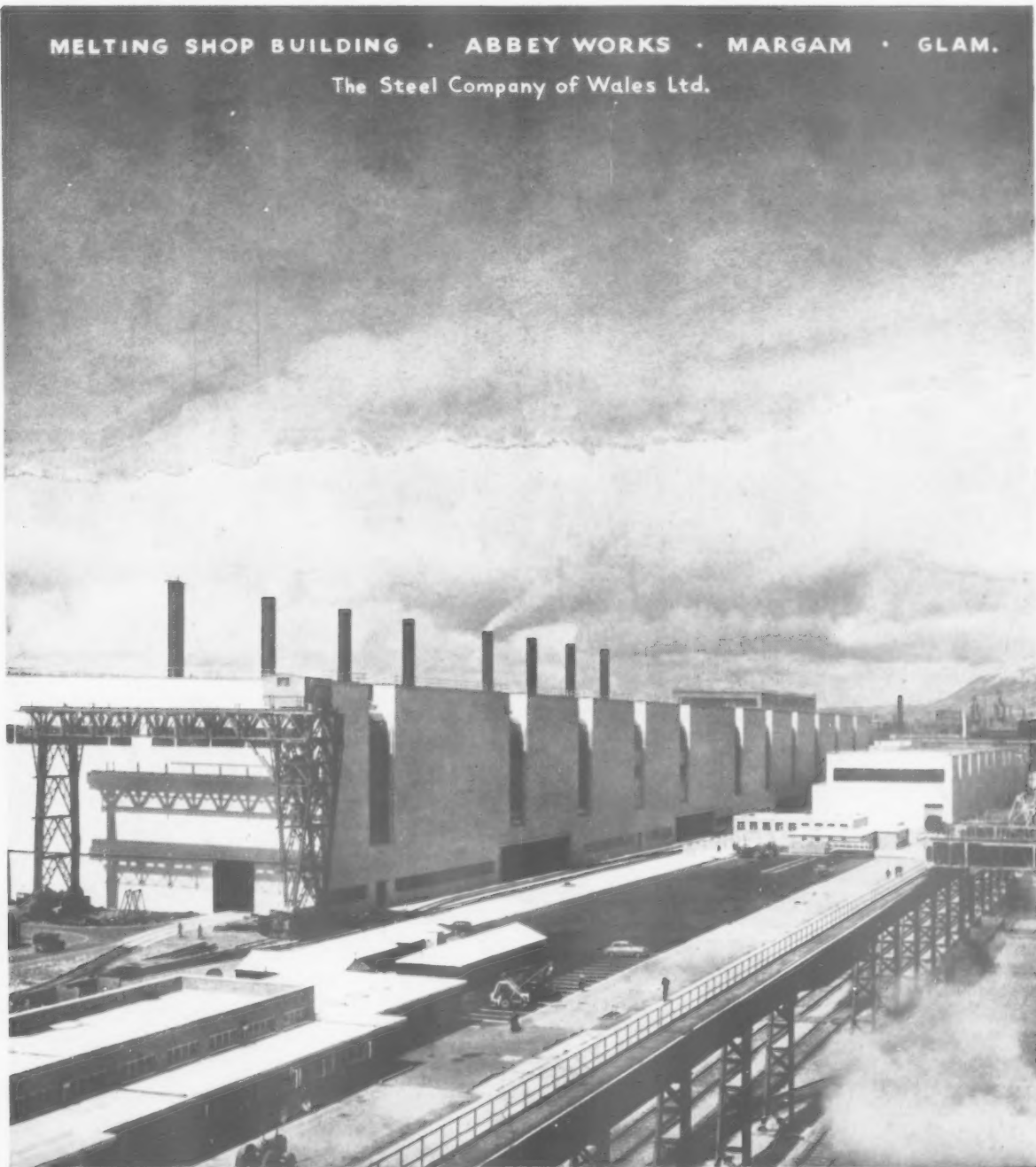
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